

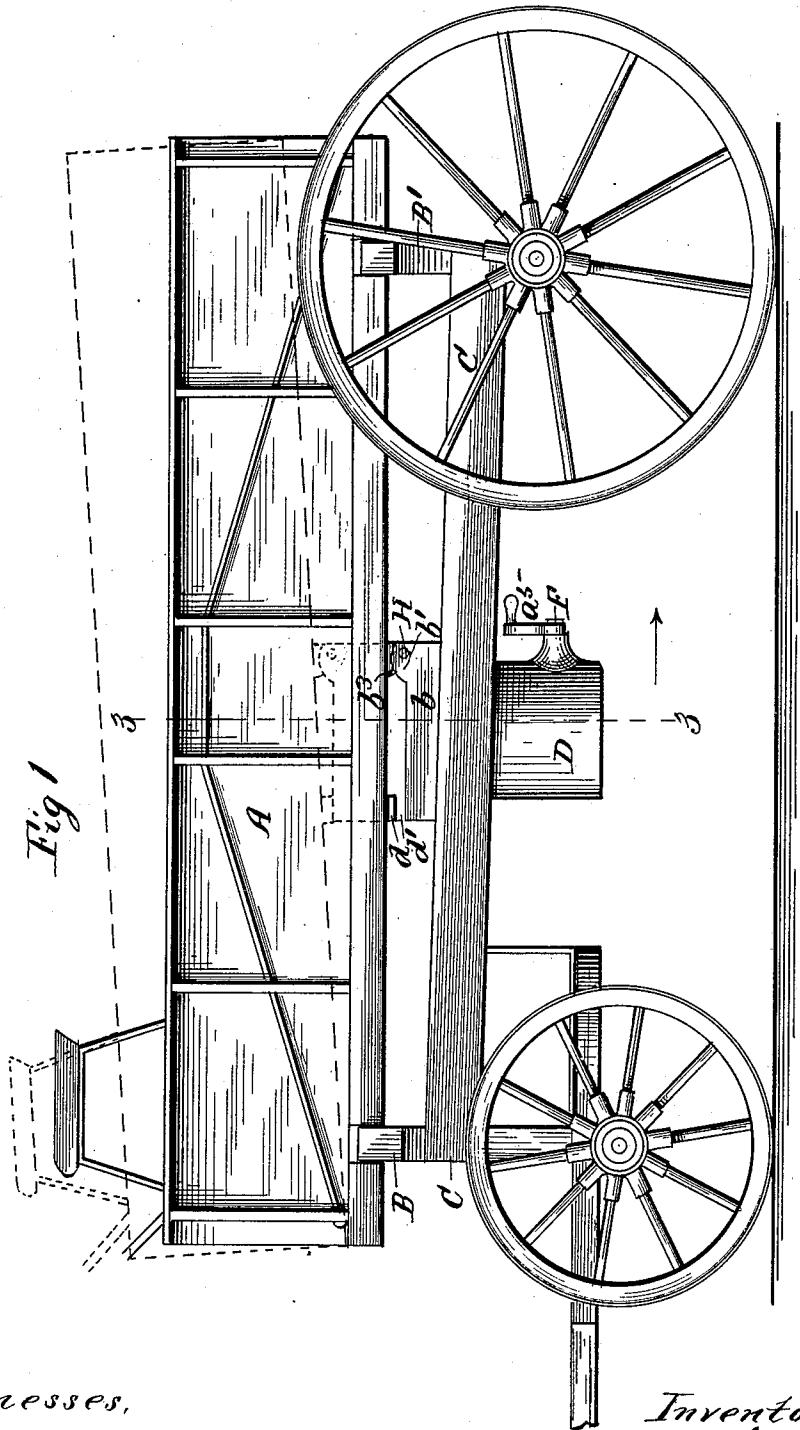
(No Model.)

3 Sheets—Sheet 1.

W. W. GREEN.
DUMPING WAGON.

No. 404,352.

Patented May 28, 1889.



Witnesses,

W. C. Coolidge
L. M. Freeman.

Inventor
Wm W. Green.
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attys.

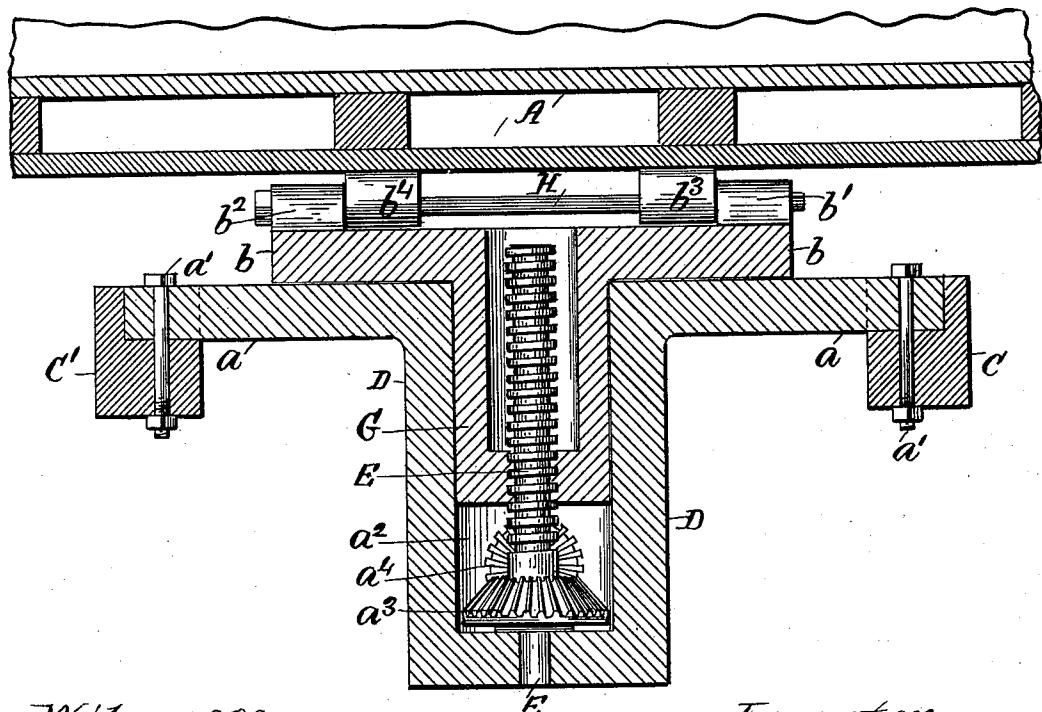
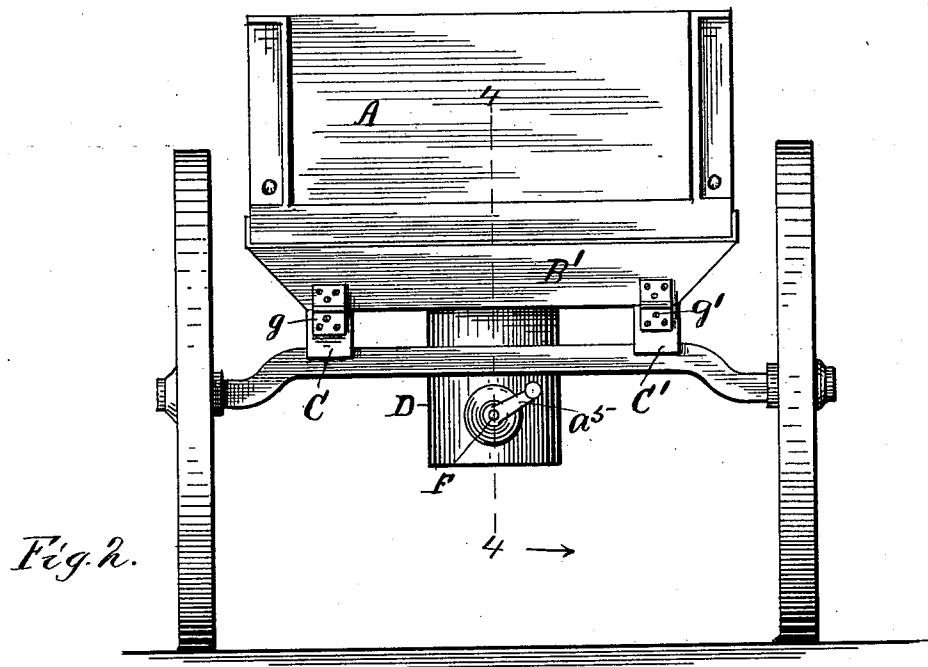
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3 Sheets—Sheet 2.

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Witnesses

W. C. Corlies
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Fig. 3. By G. B. Coupland & Co
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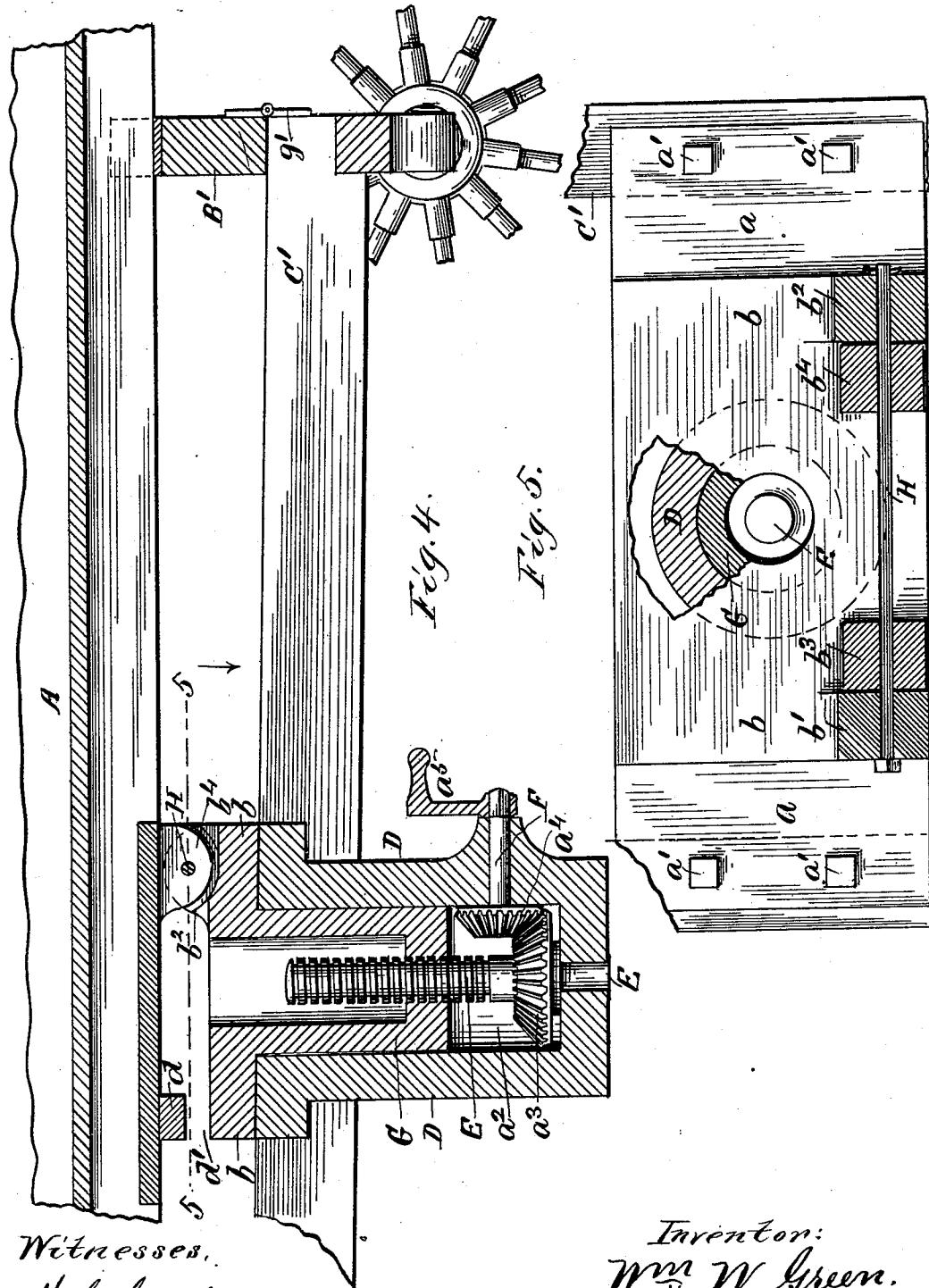
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8 Sheets—Sheet 3.

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Inventor:
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UNITED STATES PATENT OFFICE.

WILLIAM W. GREEN, OF CHICAGO, ILLINOIS, ASSIGNOR OF TWO-THIRDS TO
A. H. CASEY AND CYRUS D. LANE, OF SAME PLACE.

DUMPING-WAGON.

SPECIFICATION forming part of Letters Patent No. 404,352, dated May 28, 1889.

Application filed February 12, 1889. Serial No. 299,644. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. GREEN, 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 Dumping-Wagons, of which the following is a full, clear, and exact description, that will enable others to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

The object of this invention is to provide a dumping-wagon wherein the box or bed may be elevated bodily to clear the running-gear, then swung around and tipped or tilted and the load discharged at any point in the plane of a circle.

Figure 1 is a side elevation; Fig. 2, a rear end elevation; Fig. 3, a vertical transverse section in plane 3, Fig. 1; Fig. 4, a broken-away longitudinal section in plane 4, Fig. 2; and Fig. 5, a horizontal transverse section in plane 5, Fig. 4.

Referring to the drawings, A represents the wagon box or bed, B B' the front and rear bolsters, respectively, and C C' two horizontal parallel framing bars or hounds connecting the front and rear axles.

The cylinder D is placed underneath near the center of the wagon-box, and extends below the framing-bars, as shown in Figs. 1, 2, and 3. This cylinder is closed at the lower but open at the upper end, and is provided with the laterally-projecting holding-flanges a a, which support the cylinder in relation to the framing-bars C C', and secured thereto by means of the bolts a'. The screw-threaded shaft E is arranged vertically in the chamber a² of the cylinder, and is provided with a suitable journal-bearing in the lower closed end of said cylinder, as shown in Figs. 3 and 4. A beveled pinion, a³, is mounted on the lower part of the screw-threaded shaft and close to the bottom of the cylindrical chamber. A horizontal crank-shaft, F, extends through one side of the cylinder, and has the companion pinion a⁴ mounted thereon, and which engages with the pinion a³. On the outer projecting end of the shaft F is mounted the hand-crank a⁵.

The piston or plunger G is inserted in the

chambered cylinder, and has a threaded engagement with the vertical screw-shaft E, by the rotation of which a vertical movement is imparted to said piston. This piston is provided with the rectangular flange b, which rests upon the companion flanges formed on the upper end of the cylinder D when the piston is at its lowest or normal position. The back part of the flange b is provided with upwardly-projecting lugs b' b², (see Fig. 3,) and the under side of the wagon-box with the corresponding lugs b³ b⁴, projecting downwardly therefrom. The hinge-rod H passes through these lugs, securing the piston and wagon-box in proper position relative to each other, and providing for the tilting of the box in discharging the load. The transverse cleat d is fastened to the under side of the wagon-box in line with the front part of the piston-flange. When the piston is down to its lowest position and the box resting on the bolsters, there is a space, d', between said flange and cleat, as shown in Figs. 1 and 4. Now when the screw-shaft is rotated by means of the hand-crank and geared connections the back end of the box will be raised first, as indicated by dotted lines in Fig. 1, the front end resting on its bolster until the piston-flange comes in contact with the cleat d, when the box will be elevated bodily to the required height to clear the wheels, and may then be swung around and the load discharged at the desired point, the elevating screw-shaft serving as a pivot for the box to swing on. By rotating the hand-crank in the opposite direction the piston and wagon-box are returned to their normal position. By this arrangement the full weight of the load does not come onto the piston at first, but rather gradually, thus easing the operation.

The rear bolster, B', is attached to the ends of the framing-bars C C' by the hinges g g', so that the same may be turned outwardly and downwardly when the load is to be discharged from the back end of the wagon.

It is obvious that the elevating mechanism could be easily applied to an ordinary wagon. I therefore do not limit my improvement with reference to the particular construction and arrangement of running-gear shown.

Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. In a dumping-wagon, the combination, with the box or bed, of a chambered cylinder arranged vertically underneath said bed and supported in the frame-work of the running-gear, a vertical screw-shaft working in said cylinder, a vertically-moving piston inserted in said cylinder and having a threaded engagement with said screw-shaft, and a hinged connection with the box or bed, the pinion mounted on said screw-shaft, the horizontal shaft passing through the side of said cylinder, and the pinion and hand-crank mounted on the respective ends of said horizontal shaft, whereby the wagon box or bed may be elevated, swung on a pivot, and tilted to discharge the load, substantially as set forth. 40

2. In a dumping-wagon, the combination, with the framing-bars, of the chambered cylinder provided with holding-flanges, as described, and bolted to said bars, the screw-shaft arranged vertically on the inside of said cylinder and journaled therein, means for rotating said shaft, the piston, flanged as described and inserted in said cylinder and having a threaded engagement with said shaft, and the box or bed to which the upper end of said piston is hinged, whereby said box may be raised bodily, tilted, and the load discharged at either side or end of the wagon, substantially as set forth. 45

3. The combination, with the wagon box or bed, of a piston or plunger hinged to the under side of said box, the cylinder in which

4. In a dumping-wagon, the combination, with the vertically-moving piston provided with a rectangular flange and having lugs extending upwardly from the back edge 50 thereof, as described, of the box or bed provided with corresponding lugs projecting downwardly therefrom, the horizontal rod mounting all of said lugs, whereby a hinged connection is formed between the piston and box, and the transverse cleat secured to the under side of said box, a space being left between said cleat and flange on the piston when the latter is at its lowest position, substantially as and for the purpose set forth. 55

5. In a dumping-wagon, the combination, with the box or bed and frame-work, of a bolster hinged to the latter and adapted to be turned downwardly out of the way when tilting the box, substantially as set forth. 60

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Witnesses:

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