

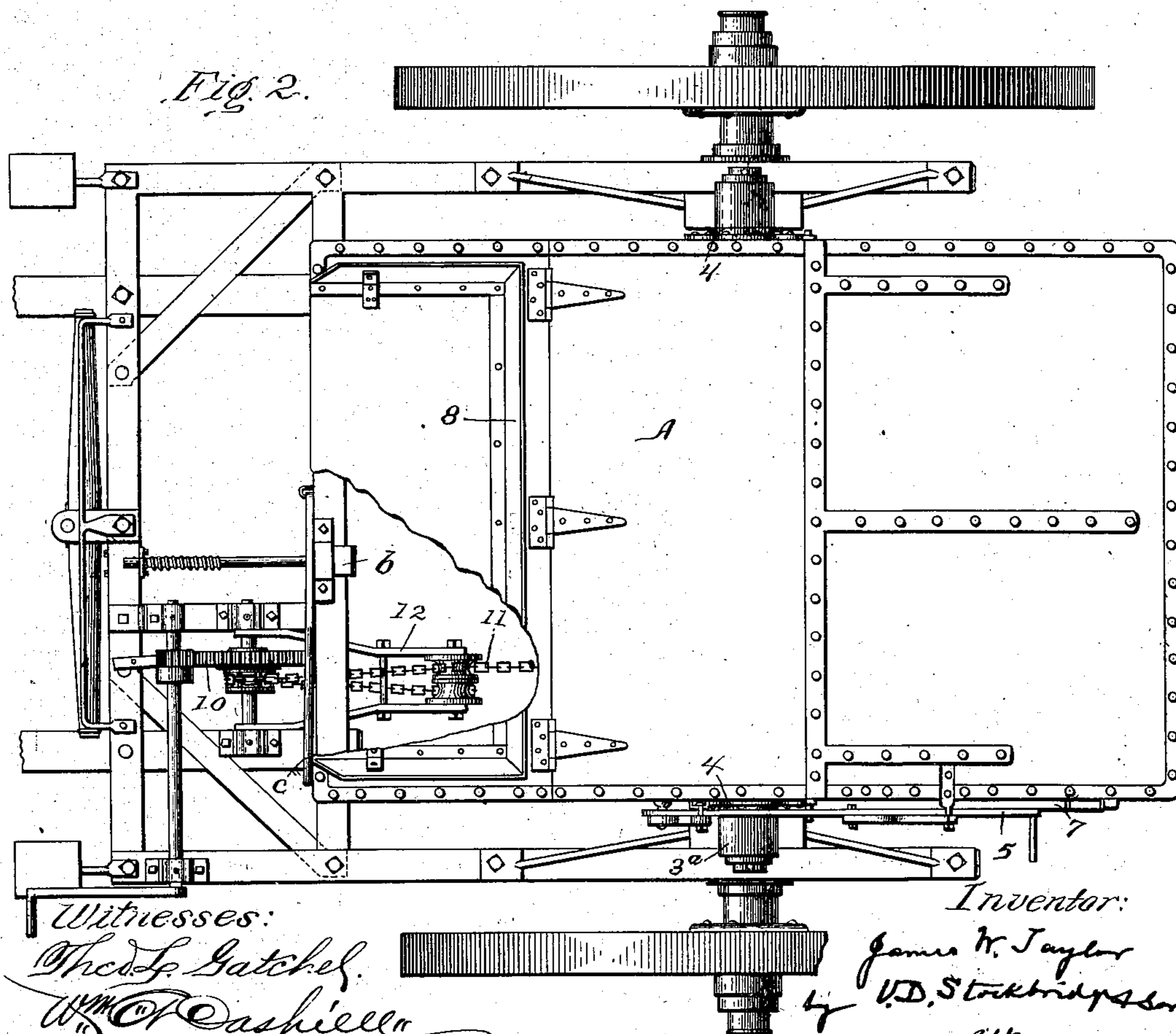
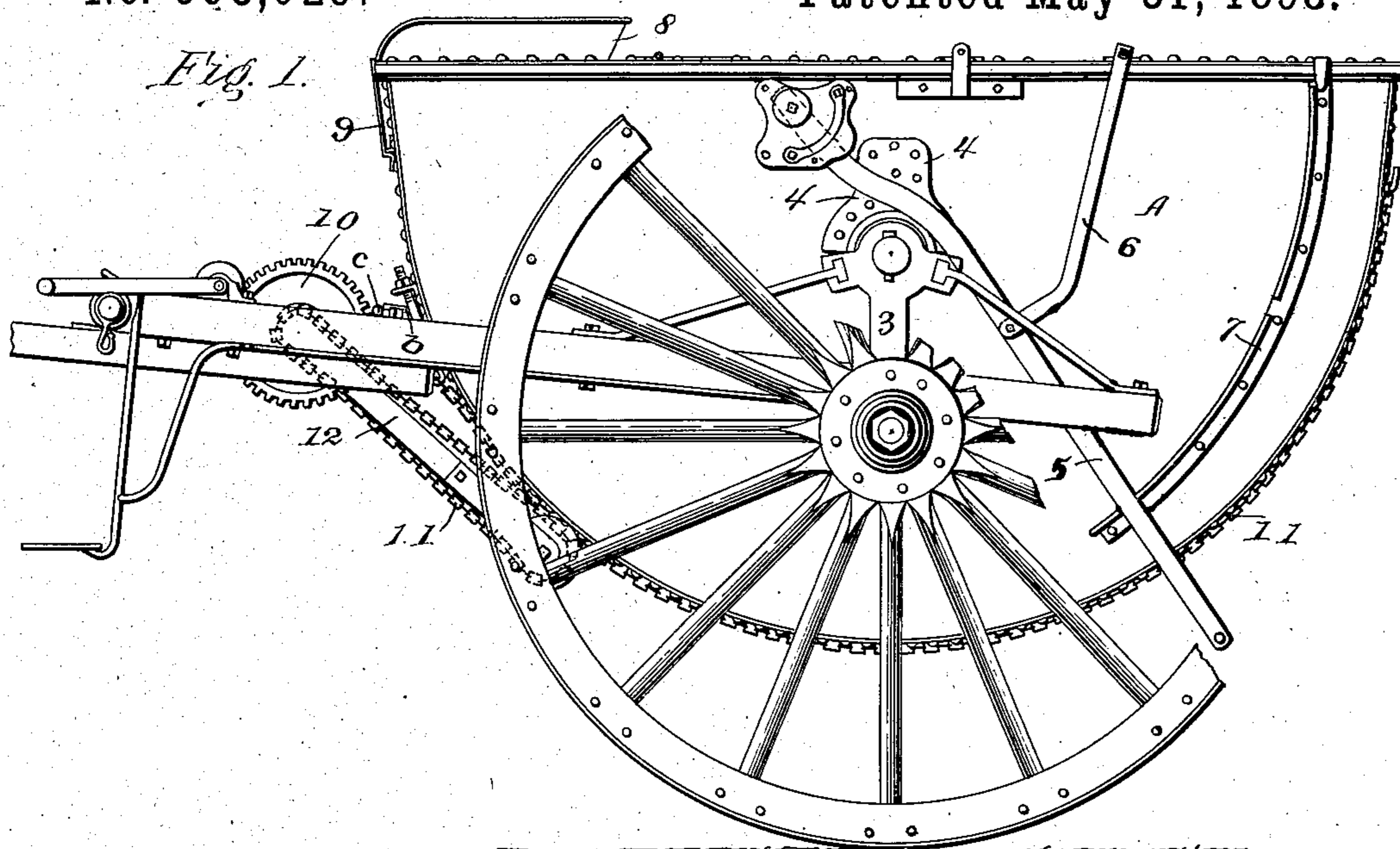
(No Model.)

2 Sheets—Sheet 1.

J. W. TAYLOR.
DUMPING CART.

No. 605,029.

Patented May 31, 1898.



Witnesses:

Thos. L. Hatchel.

Wm. C. Ashieen

Inventor:

James W. Taylor

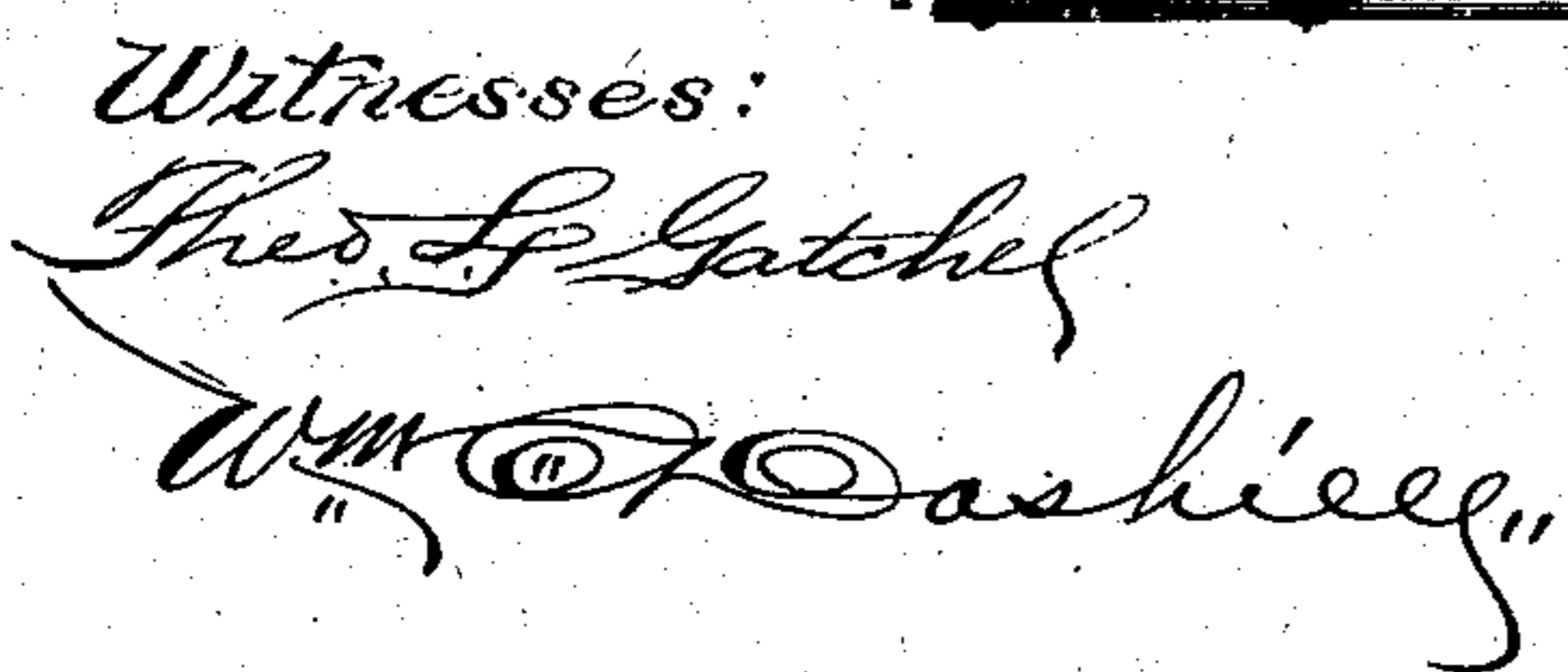
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2 Sheets—Sheet 2.

No. 605,029.

Patented May 31, 1898.



Inventor:
James W. Taylor
by V.D. Storkbridge & son
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UNITED STATES PATENT OFFICE.

JAMES WILLIAM TAYLOR, OF HERNDON, VIRGINIA, ASSIGNOR TO THE
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DUMPING-CART.

SPECIFICATION forming part of Letters Patent No. 605,029, dated May 31, 1898.

Application filed June 8, 1894. Serial No. 513,652. (No model.)

To all whom it may concern:

Be it known that I, JAMES WILLIAM TAYLOR, a citizen of the United States, residing at Herndon, in the county of Fairfax and State of Virginia, have invented certain new and useful Improvements in Dumping-Carts and Cranked Axles; and I do hereby declare the following to be 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.

My invention relates to improvements in dumping-carts and cranked axles; and it consists in certain novel features and combinations hereinafter described and claimed.

The objects of the invention are to make a perfectly water-tight body or receptacle without resort to packing to provide the most convenient and efficient means for tilting the body to dump the contents, for opening and closing the lid or cover, and for supporting the body on its axis.

In the drawings, Figure 1 is a side elevation of my improved cart. Fig. 2 is a plan of the same, a part being broken away to show the body-tilting mechanism in elevation. Fig. 3 is a side elevation showing the body in position to dump its contents. Fig. 4 is a view showing at one side the rear of the cart in elevation and at the other side the body, the tube extending across the body and the crank-arm in section, the axle-bar and the wheel-spindles being in elevation. Fig. 5 is a detail showing the locking-plate in section.

A is the cart-body, made of metal plate in a way well known. The sides of the body are perforated for the insertion of a tube *a* of the character of a boiler-tube. This tube is fitted in the side walls of the body by riveting or upsetting the end or in any suitable way.

At the extremities and within the tube I insert thimbles I to serve as boxes or bearings for the body hanging on the axle. The axle is built up of parts consisting of a bar 2 and crank-arms and spindles 3. The straight bar part 2 is made of steel rolled or forged in cylindrical form and the crank-arms and spindles of cast-steel. The crank-arms are provided with hubs or enlargements 3^a, bored to fit closely over the extremities of the bar part 2 to make a long bearing and a strong and

rigid connection between the parts. In this way a cranked axle is made cheaper than by methods of forging as heretofore generally practiced, and there is eliminated from the defect of "cold shut" incident to welding the arm and bar together in the forging process.

The most efficient and convenient way of securing the arms to the axle-bar now known to me is to make the ends of the arm slightly tapering and make the sockets in the crank-arm of corresponding shape and proportions. The crank-arms are driven onto the ends of the bar and finally drawn and secured in place by tapering keys, as shown in the drawings. By this method of coupling the parts they are about as firmly connected as if the arms were heated and afterward shrunk on the bars, and there follows the advantage of facility in separation of the parts or removal of the crank-arms in the event that repairs of any kind may be desired. In the process of building my cart the body is completed with its tube extending from side to side, one end of the bar part of the axle is extended through the tube, and then a crank-arm is coupled with the axle. The axle, carrying the body, is then ready for connection with the frame of the cart.

My means and method of making and mounting the body provides a perfectly tight cart having a body hung to swing on a standing cranked axle without resorting to packed joints between the body and the axle.

To give a broad bearing-surface for the body and obviate the tendency of the thin side walls of the body to cut the tube at the joint between them, I have made the upper end or head of the crank-arm on the side next the body of the cart circular in form and have riveted to the outside of the body plates 4 4, having concave flanged bearing-surfaces to fit over the circular part of the crank-arms. By this construction the heavy weight of the loaded cart is brought to bear on a broad surface, and the strain on the thin sides of the body is distributed, so that there will be neither tearing of the sides at the tube-holes nor cutting of the tubes.

The beams for bolting the cranked axle in a standing position are bolted to the frame at one end, and at the other end they are pro-

vided with heads or knobs fitting into recesses in the crank-arm castings, as clearly shown in Fig. 1.

The means for tilting the contents consists of a windlass 10, mounted on the frame in front of the cart-body, a common cable-chain 11, connected at both ends to the body, and a take-up attachment 12, interposed between the ends of the chain. It is observed that the body is eccentrically hung on the axle, so that without a take-up there would be slack chain in tilting the body to dump the contents. The take-up attachment shown consists of a frame suspended from the axis of the windlass, carrying at its free end guide-rollers 12^a. The chain is looped around the rag-wheel of the windlass, one end leading around one guide-pulley 12^a to the front end of the body and the other end leading from the rag-wheel over the top of the other guide-pulley 12^a around and to the rear end of the cart-body.

The means for opening and closing and for sustaining the lid in the desired position consists of a lever 5, pivoted to the side of the body, a link 6, connecting the lever and lid, and catches or stops attached to the sides of the body. In the form shown the catches or stops are formed by notching a segmental flange 7 to one side of the body. The lever 5 consists of a spring-bar and is hung so as to press toward the body, and is thus made to automatically enter the notches in segment 17 and hold the lever in whatever position desired. When the lid is closed, the lever and link are under tension, so as to draw and hold the lid firmly to its seat, and thus insure a tight joint with the body. The lever and link are so proportioned and the joints between the link, lever, and lid so adjusted that the first part of the movement of the lid in raising it is about of the same speed as that of the lever, while the latter part of its movement, when the weight of the lid is nearly balanced, is relatively much greater than that of the lever.

In order to avoid the necessity of manually pushing and working the contents of the cart-body from rear to the front to entirely fill the body and for other conveniences, I hinge that part of the cover to which the seat 8 is attached so that it may be turned up and the cart loaded through the front end to completely fill the same. A hook or catch 9 is arranged to normally secure the seat in place.

The locking-catch for holding the body in position with relation to the frame consists of a bracket 9^a, having a recess or socket 9^b, riv-

eted or otherwise secured to the front of the cart-body, and a spring-bolt or snap-catch *b*, mounted on the frame of the cart. This bolt is conveniently withdrawn to unlock the body for dumping or other purposes by means of a handle or lever *c*.

Having described my invention, what I claim is—

1. In a dumping-vehicle having a body provided with a tube extending from side to side and suspended from an axle the combination of such body, a bearing-piece attached to the body and an axle having a cooperating bearing-face substantially as described.

2. In a dumping-vehicle having a body suspended from an axle, the combination of such body, a flanged plate attached to the body, and an axle having a collar outside the body upon which the flanged plate rests to support the body as set forth.

3. In a dumping-vehicle the combination of a body, a swinging lid, a lever pivoted to one side of the body, and extending downwardly to be operated from the ground, and a link connecting the lever and the lid, substantially as described.

4. In a dumping-vehicle the combination of a body, a swinging lid or cover for said body, a lever alongside the body, and stops or catches alongside the body for holding the lever and the lid in desired positions, substantially as described.

5. In a dumping-vehicle the combination of a swinging body a swing-lid, a lever arranged alongside the body connected with the lid, and a notched segment on the side of the body for holding the lever and lid in desired positions, substantially as described.

6. In a dumping-vehicle the combination of a body, a lever arranged to project downward by the side of the body, a lid connected with the lever and means attached to the side of the body for holding the lid in a closed position under tension, substantially as described.

7. In a dumping-vehicle, the combination of an eccentrically-swinging body, a chain extending around the lower side of said body, a windlass and a take-up, substantially as described.

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

JAMES WILLIAM TAYLOR.

Witnesses:

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H. M. STERLING.