

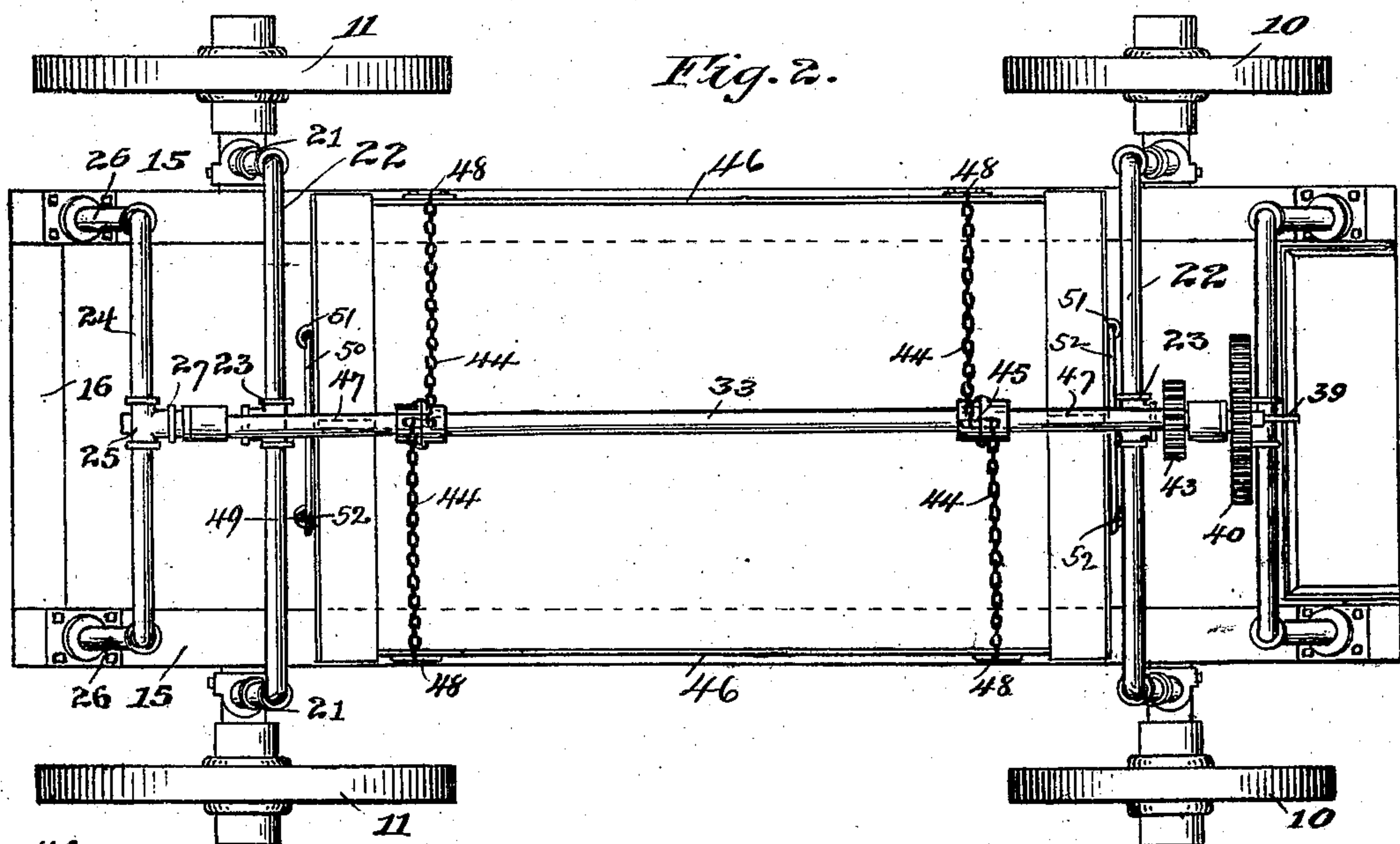
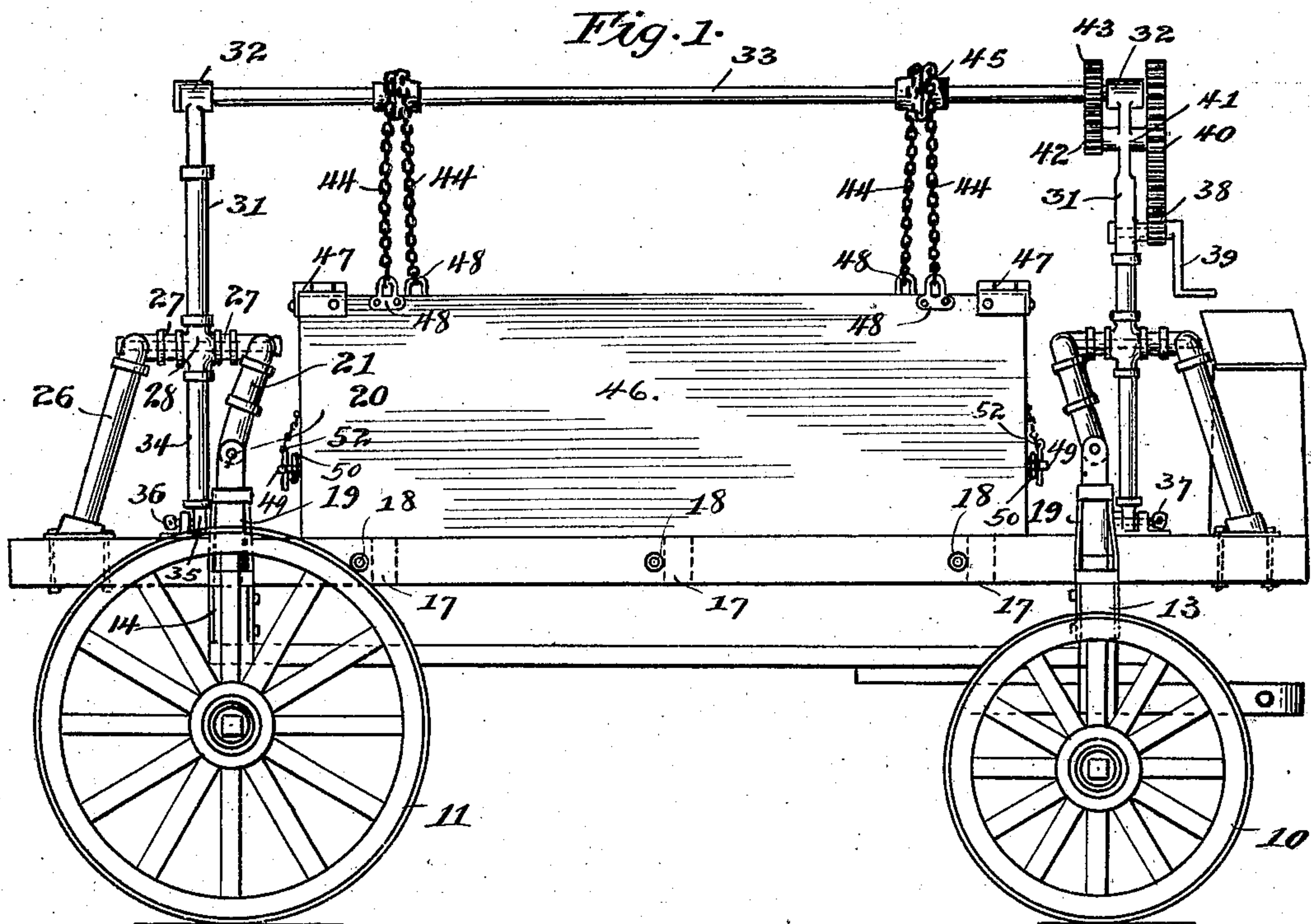
No. 847,675.

PATENTED MAR. 19, 1907.

C. LYNCH.
DUMPING WAGON.

APPLICATION FILED OCT. 13, 1905.

2 SHEETS—SHEET 1.



Witnesses,
S. S. Mann
Walter M. Fuller

Inventor,
Charles Lynch
By Offield, Towle & Lenthicum
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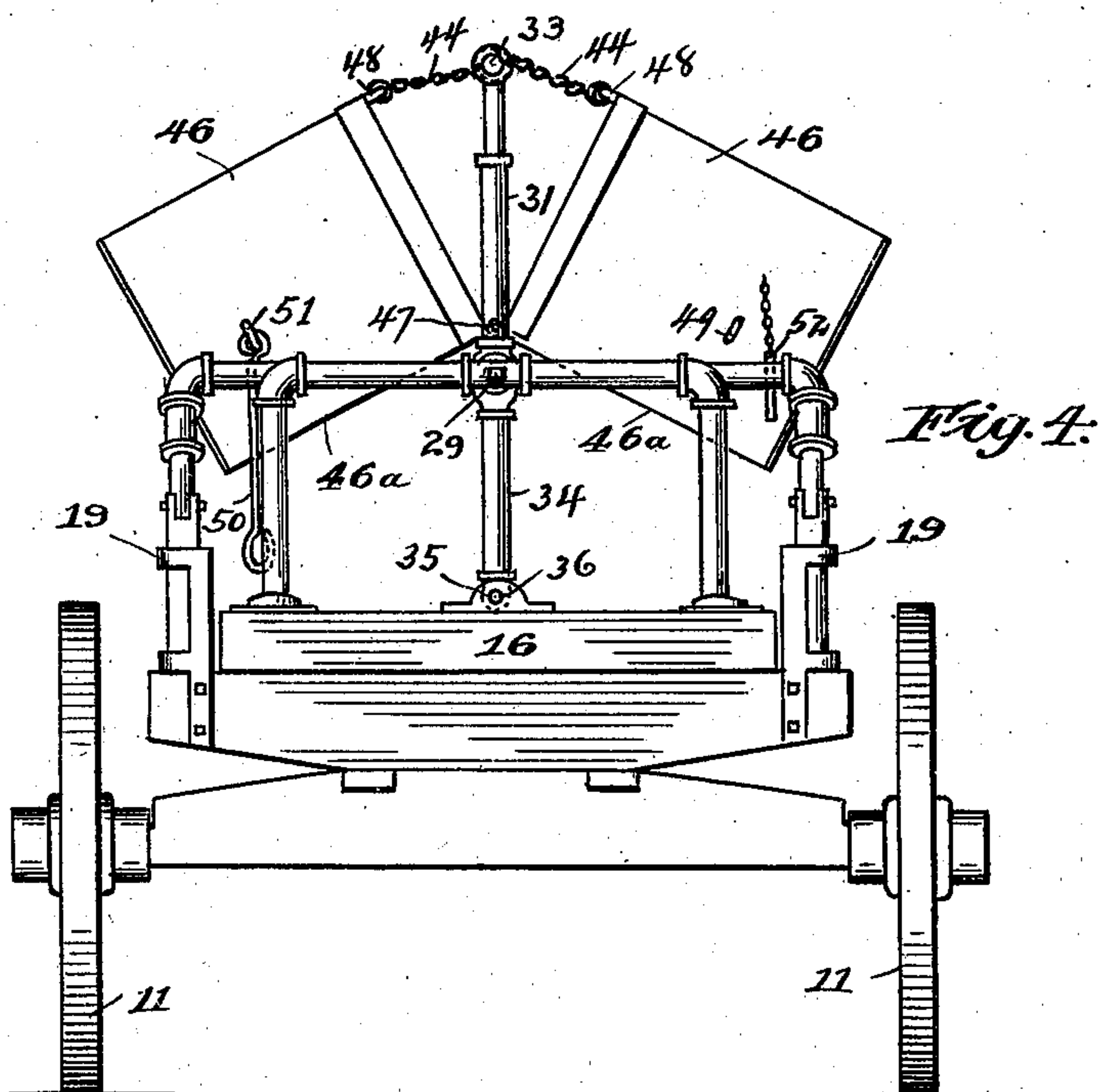
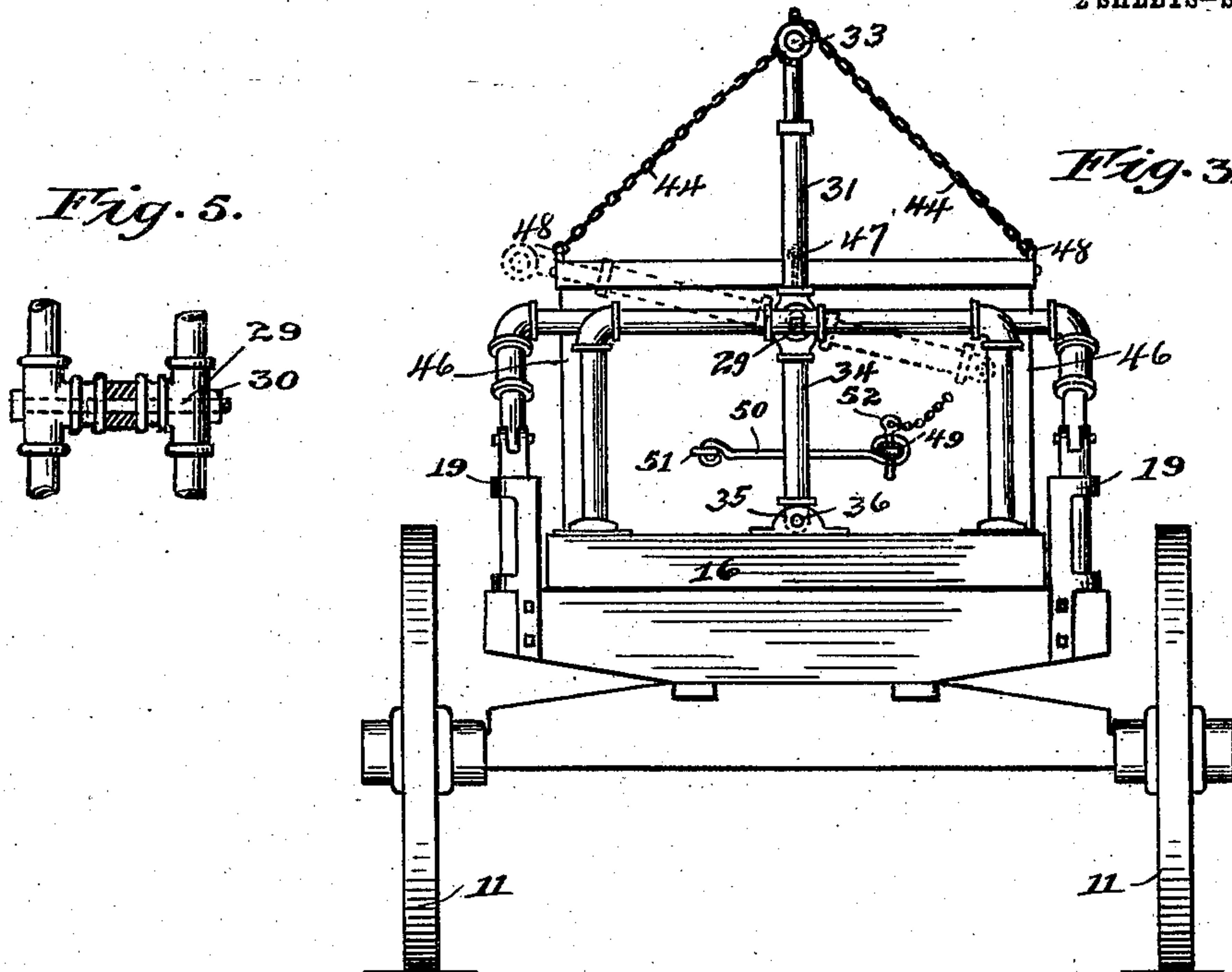
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

CHARLES LYNCH, OF CHICAGO, ILLINOIS.

DUMPING-WAGON.

No. 847,675.

Specification of Letters Patent.

Patented March 19, 1907.

Application filed October 13, 1905. Serial No. 282,644.

To all whom it may concern:

Be it known that I, CHARLES LYNCH, 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 specification.

My invention relates to dumping-wagons, and more particularly to the kind that has removable boxes for conveying sand, stones, coal, or the like in the transportation of which the wagon is used.

My improved mechanism comprises an easily-actuated means for causing the sand or other material to be dumped from the box, and also includes means to permit moving the actuating mechanism out of the way, so that a derrick or similar hoisting device can remove an empty box from the wagon-frame and replace it with a loaded one.

In the accompanying drawings I have illustrated the preferred embodiment of my invention, and on said drawings Figure 1 is a side elevation of a wagon equipped with a dumping mechanism embodying my invention. Fig. 2 is a plan view of the device shown in Fig. 1. Fig. 3 is a rear elevation of the wagon. Fig. 4 is a similar elevation showing the two parts of the box in position to dump their contents, and Fig. 5 is a detail view of the pivotal arrangement for the supporting means for the box-lifting mechanism.

The wagon equipped with my improved dumping mechanism is of the usual type, comprising front wheels 10, rear wheels 11, and the other ordinary parts of the running-gear of a wagon, including front and back bolsters 13 and 14. The main frame of the wagon consists of longitudinal beams 15, end beams 16, intermediate transverse beams 17, and adjacent tie-rods 18. To the outer end of each of the bolsters 13 and 14 is secured a stake-pocket 19, the same being riveted or bolted to the bolsters. At the upper ends of members 20, fitted in the pockets 19, are attached inclined arms 21, united at their upper ends by transverse members 22. These inclined members and their horizontal connecting members are preferably made of sections of pipe and elbows, the center portions of the horizontal members 22 being supplied with T's 23. Running parallel with each member 22 is a similar, but shorter, pipe-

section 24, with a T 25 at its central part, in alinement with T 23, the ends of members 24 being supported by the inclined pipe-sections 26, suitably secured to the longitudinal members 15 of the wagon-frame. Inserted in the adjacent ends of the T's 23 and 25 are plugs 27, between the heads of which is held casting 28, loosely mounted upon and rotating on bolt 29, held in place by nut 30, the bolt passing through the T's, the plugs, and pivoted member 28. Extending upwardly from each member 28 is a pipe-section 31, at the upper end of which is a bearing 32, within which rotates the longitudinal shaft 33. Extending downwardly from each member 28 is a pipe-section 34, provided with a perforated projection 35, and on the frame of the wagon is a member 36, with upstanding perforated ears, through which pin 37 passes, acting in conjunction with projection 35 to hold the support in vertical position. On the forward side of front support 31 is rotatively mounted pinion 38, provided with operating-handle 39, the pinion meshing with gear 40, fixed to a short shaft passing through bearing 41 at the upper portion of supporting member 31. Pinion 42 on the inner end of this shaft meshes with gear 43, keyed to the main shaft 33. It will be evident from this construction that by turning handle 39 shaft 33 is rotated by means of the gears described above. On the shaft 33 are four chains 44, which are secured to the flanges of members 45, fixed to the shaft. This construction involves, therefore, a forward and rear pivoted supporting member, the two being joined together by the shaft rotating in bearings at their upper ends. The forward support is provided with a handle and gears for actuating the shaft, which has attached to it a plurality of hoisting-chains.

The dumping-box of the wagon, which rests upon the wagon-frame, comprises two receptacles 46, with their open mouths 46^a facing each other, the two receptacles being pivoted to each other at the top by hinges 47. At the upper outer sides of the box I provide ears or lugs 48, with which the chains 44 may be engaged by means of hooks at their ends. The two portions of the box are held together and prevented from opening when the box is elevated by means of chains

44, by staple 49 on one part of the box and arm 50, pivoted to the other half of the box at the point 51, pin 52, chained to the end of the box, being adapted for insertion in staple 49 to hold arm 50 with its loop at the end over the staple 49. A fastening means of this type is provided at each end of the box.

The operation of the device is as follows:

With the two halves of the box fastened together by the locking means at each end described above and with the chains 44 attached to the ears 48 the vehicle is driven to the point where its contents are to be discharged. The operator unlocks the two parts of the box, removing pins 52 and separating arms 50 and staples 49, and by turning the handle 39 elevates the same, the box opening up and discharging a portion, if not all, of its contents due to the relative position of the hinges and the ears 48. By this operation chains 44, attached to the opposite sides of the box, are wound up on shaft 33 in reverse directions, and as the box continues to be elevated the chains draw in sufficiently on the attached lugs 48 to open the box to its fullest extent, thereby discharging the total contents. The box or receptacle is then lowered by turning the crank 39 in the opposite direction. The two halves of the box are locked together and the vehicle driven to the spot where it is to receive a new load. At this point the chains 44 are unhooked from ears 48, pins 37 withdrawn, and the pivoted supports 31, with their connecting shaft 33, turned on their pivots, so as to be out of the way of the box, as shown in Fig. 3, to permit the latter to be raised by a derrick or similar hoisting device, the ends of whose chains are secured to the ears 48.

It will be apparent from this construction and description that the boxes can be quickly and easily removed from the wagon and that when they are on the wagon-frame they can be readily dumped by turning the crank or handle 39.

My invention is not limited to the details of construction as illustrated or described, and for that reason my invention should not be restricted to the specific mechanical features shown, except to the extent indicated in the appended claims.

I claim—

1. In a device of the character described, a dumping-box having means for the attachment of operating-chains thereto, in combination with a shaft, chains fastened to said shaft, and adapted to engage said attaching means of said box, and a pivoted support for said shaft, substantially as described.

2. In a device of the character described, a dumping-box comprising two open-mouthed receptacles hinged together at the top and having their mouths facing each other,

means to lock the two halves of the box together, and means for the attachment of operating-chains to said box, in combination with an operating-shaft, chains fastened to said shaft, and adapted to engage the attaching means of said box, and a pivoted support for said shaft, substantially as described.

3. In a device of the character described, a wagon-frame, a dumping-box adapted to rest upon said frame, said box comprising two open-mouthed receptacles hinged together at the top and having their mouths facing each other, means to lock the two parts of the box together, and means for the attachment of operating-chains to said box, in combination with an operating-shaft rotatably mounted on said wagon-frame, and chains fastened thereto, adapted for engagement with said attaching means of the box, the turning of said shaft causing the chains to be wound thereupon and the box to be elevated, substantially as described.

4. In a device of the character described, a wagon-frame, a dumping-box adapted to rest upon said wagon-frame, said box having means for the attachment of operating-chains thereto, in combination with a shaft, chains fastened to said shaft, and adapted to engage said attaching means of said box, and a support for said shaft pivotally mounted on said wagon-frame, substantially as described.

5. In a device of the character described, a wagon-frame, a dumping-box adapted to rest upon said frame, said box comprising two open-mouthed receptacles hinged together at the top and having their mouths facing each other, means to lock the two parts of the box together, and means for the attachment of operating-chains to said box, in combination with an operating-shaft, chains fastened thereto and adapted for engagement with said attaching means of the box, and a support for said shaft pivotally mounted on said wagon-frame, the turning of said shaft causing the chains to be wound thereupon or unwound therefrom, thereby elevating or lowering said dumping-box, substantially as described.

6. In a device of the character described, the combination of a wagon-frame, a dumping-box supplied with means for the attachment of chains thereto, a shaft, a support for said shaft pivotally mounted on said wagon-frame, locking means for said support to hold the same in upright position, and chains fastened to said shaft and adapted to engage the attaching means of said dumping-box, substantially as described.

7. In a device of the character described, the combination of a wagon-frame, a pivoted support mounted upon said frame, means to lock said support in upright position, a shaft rotatably mounted in said support, chains

fastened to said shaft, intermeshing gears, an operating-handle to actuate said shaft by means of said gears, and a dumping-box comprising two open-mouthed receptacles hinged together at the top and having their mouths facing each other, means to lock the two halves of said box together, and means

for the attachment of said chains to said box, substantially as described.

CHARLES LYNCH.

Witnesses:

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