No. 756,912. PATENTED APR. 12, 1904.

H. C. TRIPP.

DUMP WAGON.

APPLICATION FILED DEC. 16, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

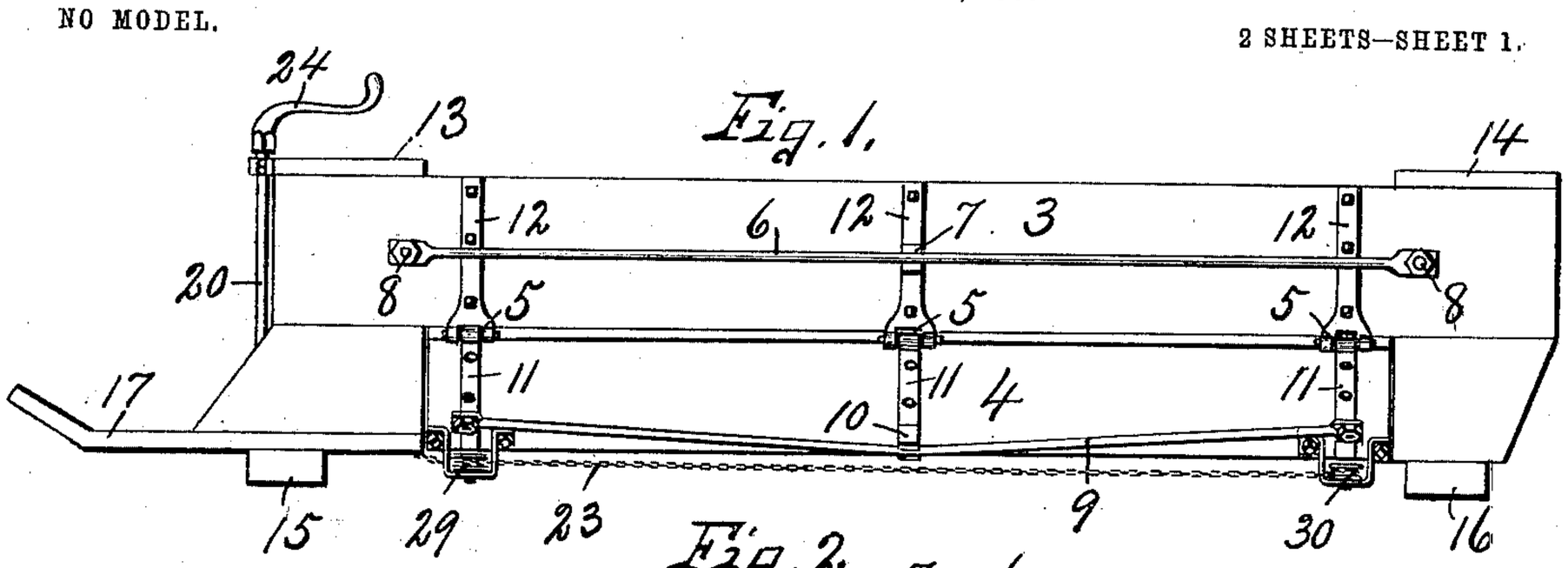


Fig. 2.

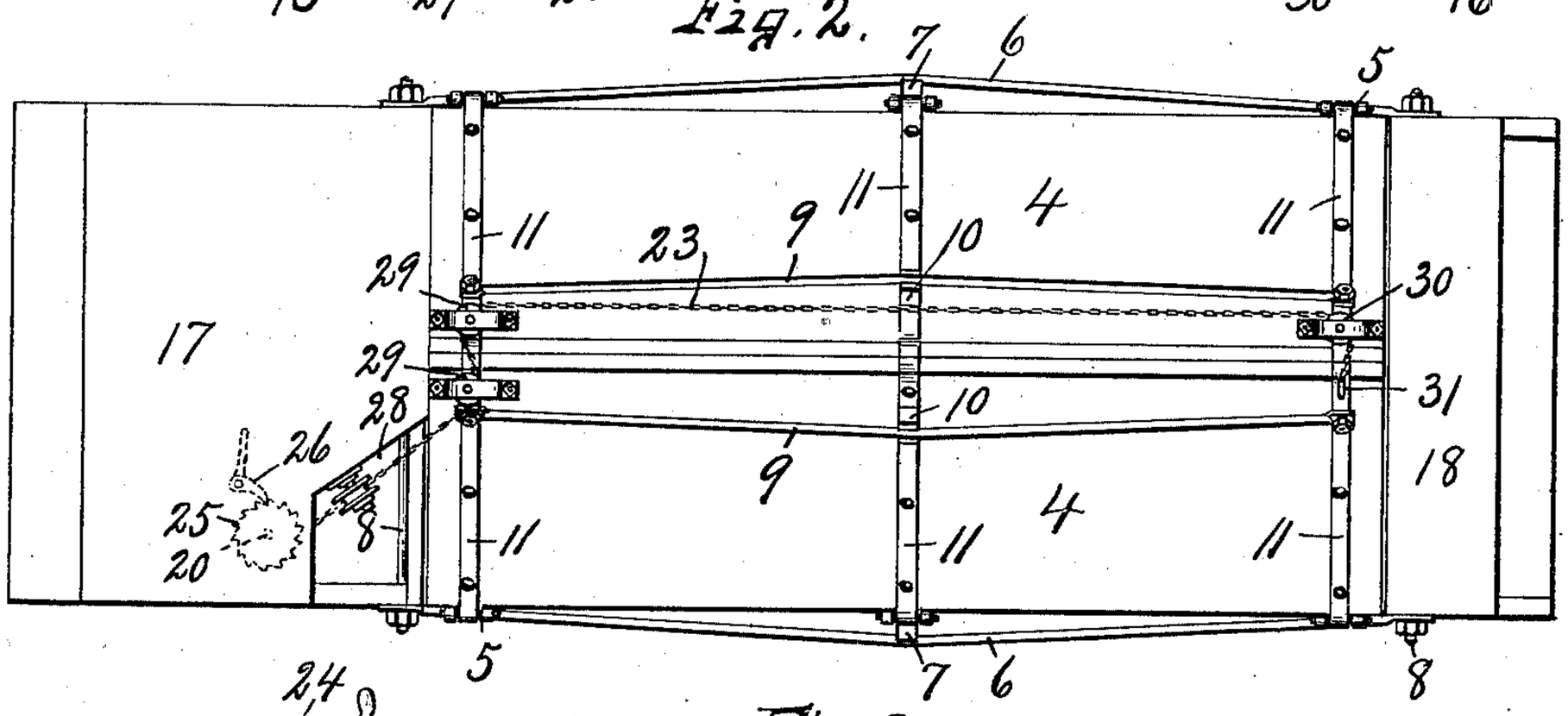


Fig. 3.

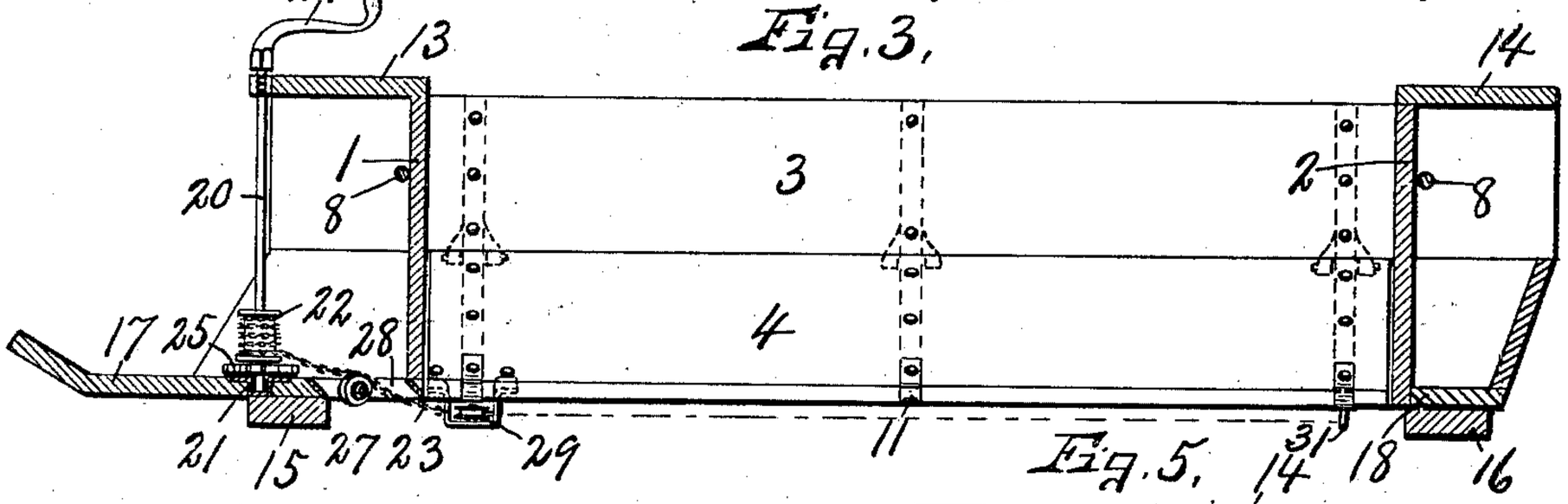


Fig. 4.

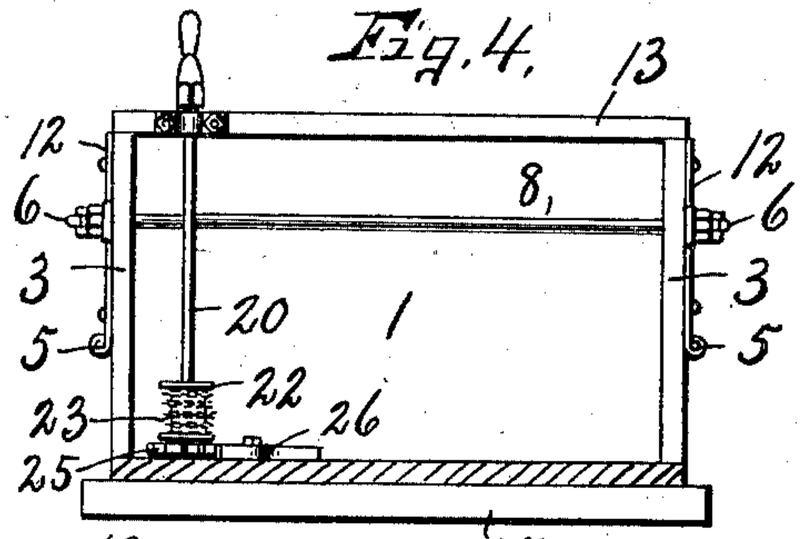
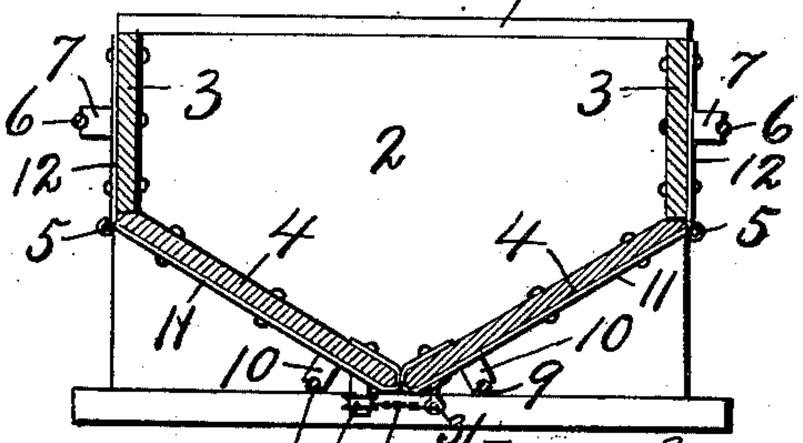


Fig. 5.



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H. C. TRIPP.

DUMP WAGON.

APPLICATION FILED DEC. 16, 1903.

NO MODEL. 2 SHEETS—SHEET 2.

Fig. 6.

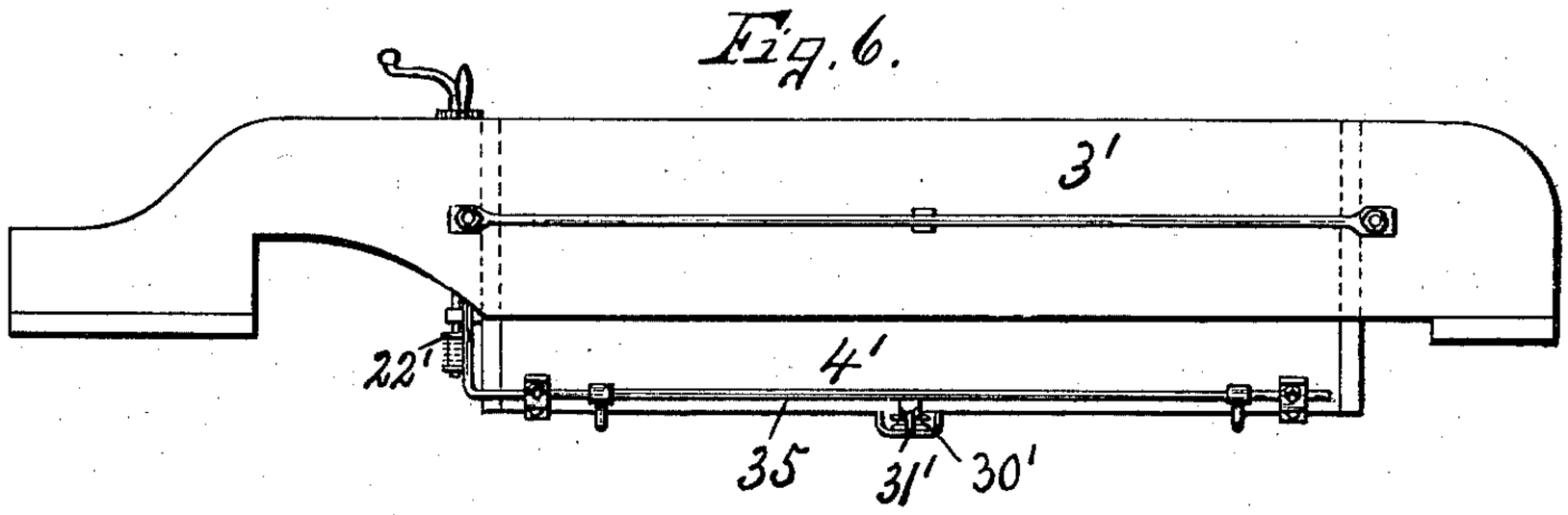


Fig. 7.

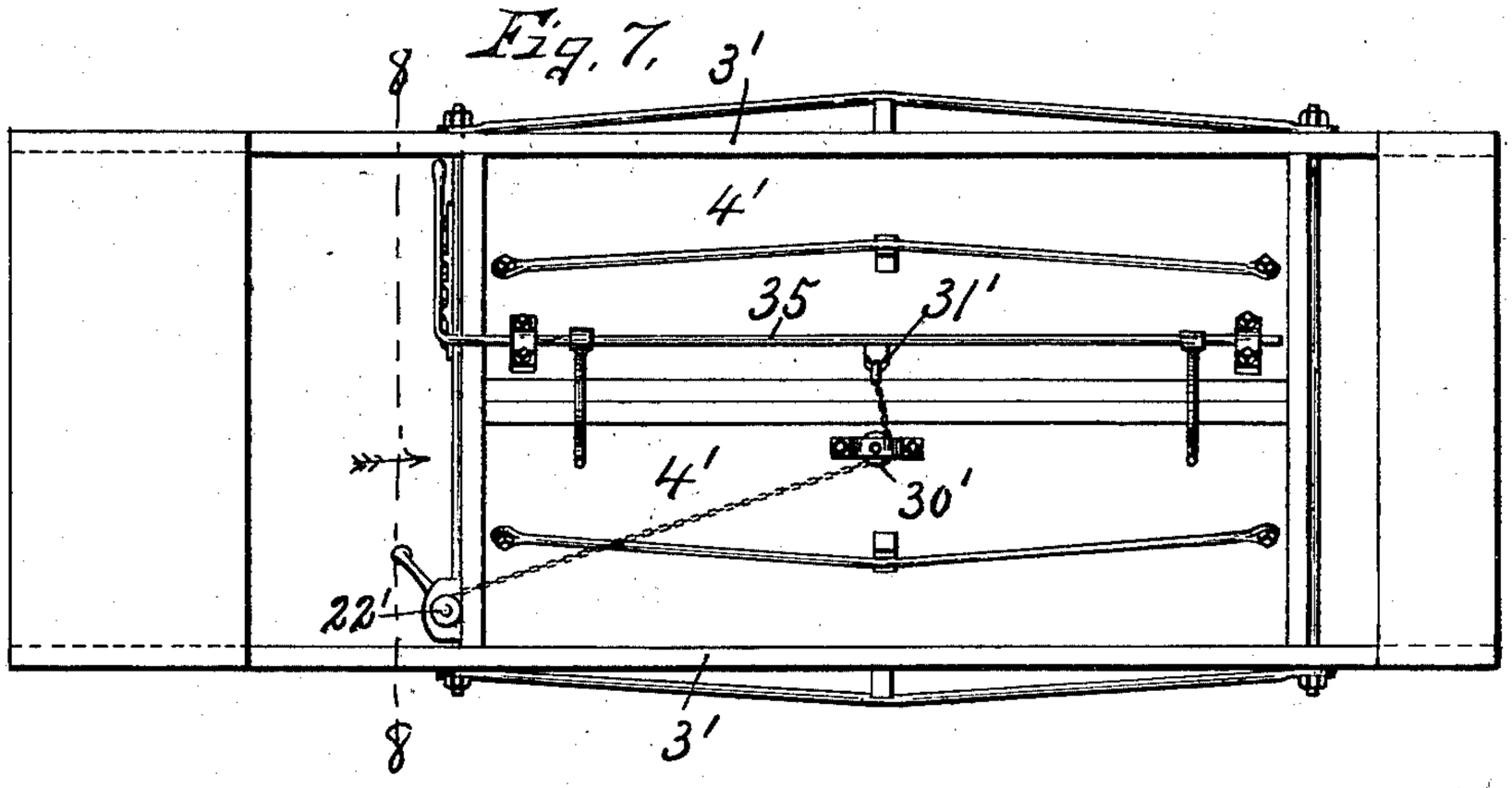


Fig. 8.

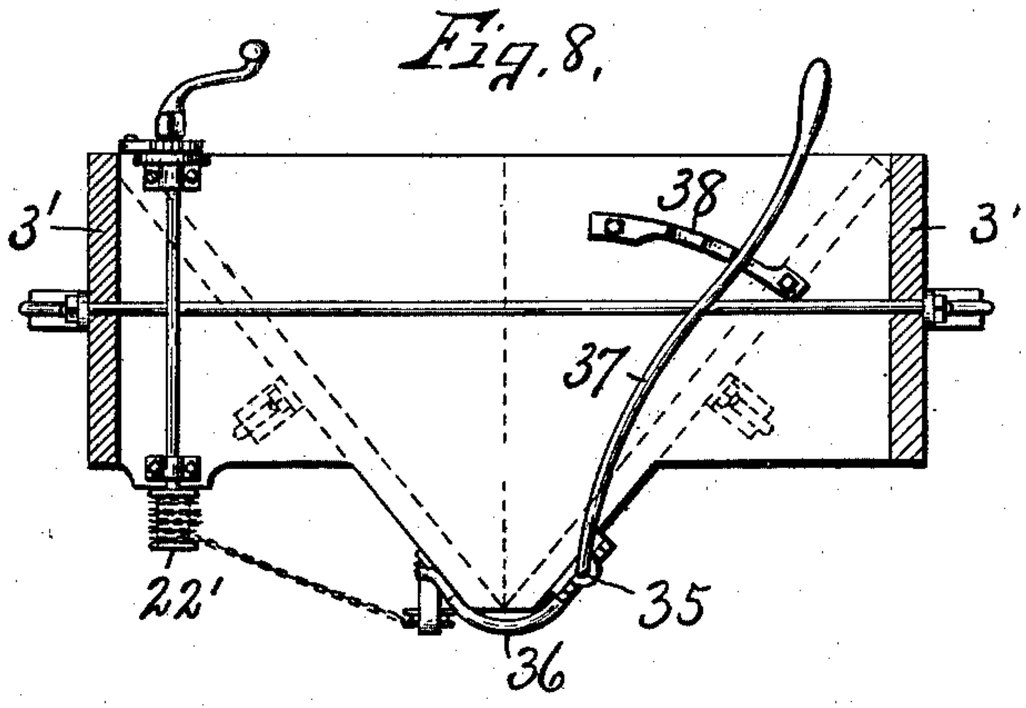
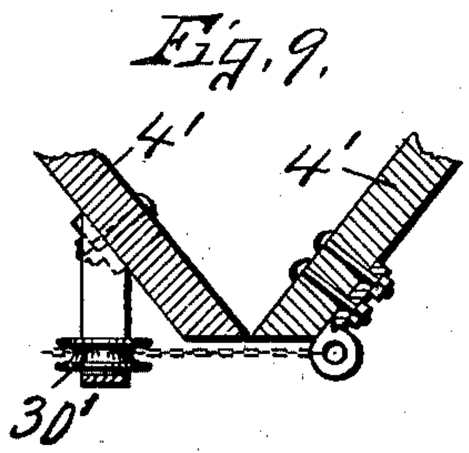


Fig. 9.



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No. 756,912. Patented April 12, 1904.

UNITED STATES PATENT OFFICE.

HENRY C. TRIPP, OF AUBURN, NEW YORK.

DUMP-WAGON.

SPECIFICATION forming part of Letters Patent No. 756,912, dated April 12, 1904.

Application filed December 16, 1903. Serial No. 185,396. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. TRIPP, of Auburn, in the county of Cayuga, in the State of New York, have invented new and useful Improvements in Dump-Wagons, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to improvements in dump-wagons in which the box is provided with swinging bottom doors or sections which are hinged to the lower edges of the sides of the box and incline downwardly and inwardly to meet at the longitudinal center of the box when in their closed position, the sides and ends of the box constituting the main supporting-frame.

One of the objects of this invention is to control the operation of the doors by means of a vertical drum at the front of the box and a cable extending rearwardly under one of the doors and then transversely and anchored to the other door and its intermediate portion rendering over suitable sheaves on said doors, the idea being to operate the doors through the medium of a single cable as distinguished from a two-cable system, one for each door, as it is well known that where two separate cables are employed they are more or less liable to stretch unequally, thereby permitting one of the doors to sag at the edges, which causes a leak in the bottom, while, on the other hand, in the use of a single cable, as in my present device, this inequality in the movement of the doors is avoided.

Another object is to further avoid the sagging of the doors intermediate their ends by providing each door with a lengthwise rigid truss-bar and to also prevent the spreading of the sides by the use of similar truss-bars.

In the drawings, Figures 1 and 2 are respectively a side elevation and an inverted plan of a dump-wagon embodying the features of my invention. Fig. 3 is a lengthwise central sectional view through the box seen in Figs. 1 and 2. Fig. 4 is a front end view of the same. Fig. 5 is a transverse sectional view through the box between its ends. Figs. 6 and 7 are respectively a side elevation and top plan of a modified form of my invention, showing the cable as connected to the center of the bottom doors instead of at the ends and also showing a locking device for holding the meeting edges of the doors in their closed position. Fig. 8 is a sectional view taken on line 8 8, Fig. 7, looking at the front end of the box. Fig. 9 is an enlarged sectional view of the lower meeting edges of the doors, which in this instance are hinged to the upper edges of the sides of the box or frame.

Similar reference characters indicate corresponding parts in all the views.

The box for receiving and retaining the load consists of front, rear, and side walls 1, 2 2, and 3 and bottom doors or sections 4, the latter being hinged at 5 to the lower edges of the sides 3 and when in their closed position incline downwardly and inwardly and meet in the plane substantially midway between the sides 3. It is therefore apparent that the sides form the supporting-frame for the bottom sections 4, which swing between the ends 1 and 2, as best seen in Fig. 3. The front and rear ends 1 and 2 extend downwardly below the lower edges of the sides 3 and preferably to a plane substantially coincident with the lower face of the meeting edges of the bottom sections 4, so as to prevent the discharge of any part of a load except at the center of the box when the bottom sections are open. This feature of my invention is advantageous when desired to only partially open the doors for discharging the load in small quantities over a considerable area, as in road-making, it being understood that the doors may be held in any position by the device which is utilized for controlling the operation of the doors, as presently described.

The sides and ends of the box are disposed in substantially vertical positions, so as to obtain as large a load as possible within a minimum space, and by hinging the doors at the lower edges of the sides and inclining them downwardly and inwardly therefrom it is evident that the box is capable of carrying a large load and that the top of the box is comparatively low down, so that the labor of filling by shoveling from the surface of the ground is comparatively easy.

I have observed that in carrying heavy loads

the sides of the box are more or less liable to spread, thereby causing an opening between the meeting edges of the bottom sections, and in order to obviate this each side is provided with a truss-rod 6, which extends lengthwise of the sides and is arched outwardly at the center by a suitable brace or bracket 7, the opposite ends of the truss-rod being secured by bolts 8, which are passed through the sides of the box in front and at the rear of the ends 1 and 2. These rods 8 not only serve to secure the ends of the truss-rods in place, but also serve to tie the ends of the sides of the box together to afford additional protection against spreading. In like manner each of the bottom sections 4 is provided with a truss-rod 9, which extends lengthwise of said bottom sections near their meeting edges and are secured at their ends to the ends of the doors, the central portions being arched downwardly and are held in this position by brackets 10. The parts of this box are preferably formed of wood, and the bottom doors are provided with iron strap-hinge sections 11, which are pivoted at 5 to similar iron strap-hinge sections 12, secured to the sides 3. These sides project beyond the ends 1 and 2, and upon the projection is mounted a seat 13, while the rear ends are connected by a similar cap or seat 14. These longitudinal extensions of the sides are also extended downwardly at the front and rear of the ends and are connected by suitable bolsters 15 and 16 for receiving the front and rear axles, respectively, the front of the box being provided with a forwardly-projecting platform 17, and a suitable platform 18 is provided at the rear, thus forming housings capable of receiving and retaining tools or other implements.

An upright shaft 20 is stepped in a suitable bearing 21 in the front platform 17, and its lower end is provided with a drum 22, to which is secured one end of a cable 23, while the upper end of this shaft is provided with a handle 24, by which the shaft is rotated by the driver. A ratchet-wheel 25 is secured to the lower end of the shaft near the upper surface of the platform 17, and upon this platform is mounted a pawl 26, movable into and out of engagement with the ratchet-teeth for holding and releasing the drum or shaft. The cable 23 extends rearwardly and downwardly over an idler 27 and through an opening 28 in the platform 17 and is then passed around similar idlers or sheaves 29 on the front end of the doors—that is, it is passed over the rear face of the idler nearest to the drum 22 and then around the front face of the other idler 29 and is then extended rearwardly parallel with the meeting edges of the doors, and its rear end is passed around an additional idler 30 on the rear end of the door farthest from the drum 22, and its extremity is then secured or anchored to an eye 31 on the rear end of the other door.

The dump-wagon seen in Figs. 6 to 9, inclusive, is adapted for carrying lighter loads and differs from that seen in Figs. 1 to 5 in that the bottom sections 4′ are hinged to the upper edges of the sides, as 3′, and although I employ a single cable having one end wound upon a drum 22′ its rear end is passed over an idler 30′ on the center of one of the doors and is anchored to an eye 31′ on the center of the other door, so that the rear end of the cable extends transversely of the doors across the opening between the meeting edges and substantially midway between the ends. In this construction I employ a suitable mechanism to lock the opposite ends of the meeting edges of the doors in their closed position, and this means is shown as consisting of a rock-shaft 35, which is journaled in suitable bearings on one of the doors and is provided with laterally-projecting arms 36, extending under the meeting edges of the doors and engaging the bottom face of the other door, the front end of said rock-shaft being provided with an upwardly-extending hand-piece 37, which is adapted to engage a fixed detent 38 upon the front end of the box to hold the locking means in its operative position, and it is apparent that by rocking the lever 37 to the left, Fig. 8, the arms 36 will be thrown out of locking engagement to permit the doors to swing open.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a dump-wagon, in combination, a box having bottom doors hinged to the sides of the box and inclining downwardly and inwardly therefrom, a cable having a portion thereof extending transversely of and under the doors and connected to said doors at opposite sides of their meeting edges, and means to wind and unwind the cable.

2. In a dump-wagon, in combination, a box having bottom doors hinged to the sides of the box and inclining downwardly and inwardly therefrom, sheaves on the front ends of the doors, a sheave on the rear end of one of the doors, an anchorage on the rear end of the other door, a cable passed around said sheaves and attached to the anchorage, and means to wind and unwind the cable.

3. In a dump-wagon, the combination of a box having swinging bottom doors hinged to the sides of the box and inclining downwardly and inwardly therefrom, truss-rods secured to the doors, and means to control the operation of the doors.

4. In a dump-wagon, the combination of a box having swinging bottom doors hinged to the sides of the box and inclining downwardly and inwardly therefrom, truss-rods extending lengthwise of the doors, parallel with their meeting edges and secured to said doors, and means to close the doors.

5. In a dump-wagon, the combination with the sides and ends of a box, of swinging bot-

tom doors hinged to the lower edges of the sides and meeting in a plane substantially midway between and parallel with their swinging axes, truss-rods secured to the doors parallel with and between the axes and meeting edges, and means for closing the doors.

6. In a dump-wagon, the combination with the sides and ends of a box, of swinging bottom doors, hinged to the sides, and truss-rods on the sides spanning the distances between the ends, to prevent the spreading of the sides.

7. In a dump-wagon, the combination, with the sides and ends of a dump-box having swinging bottom doors, of truss-rods at the sides and tie-rods at the ends of the box, the tie-rods connecting corresponding ends of the truss-rods.

8. In a dump-wagon, the combination, with the sides and ends of a box having swinging bottom doors hinged to the sides, of truss-rods on the sides above the swinging axes of the doors and additional truss-rods on the doors near their meeting edges and below said axes.

9. In a dump-wagon, the combination with the sides and ends of a box having swinging bottom doors hinged to the sides, an upright drum, a cable attached to the drum and extending under the doors and transversely of their meeting edges, one end being anchored to one of the doors and rendering over a bearing on the other door.

10. In a dump-wagon, the combination with the sides and ends of a box having swinging bottom doors hinged to the sides, an upright drum, a cable attached to the drum and extending under the doors and transversely of their meeting edges, one end being anchored to one of the doors and rendering over a bearing on the other door, of truss-rods lengthwise of and upon the sides and doors and tie-rods connecting the sides of the box and ends of the truss-rods.

In witness whereof I have hereunto set my hand this 14th day of December, 1903.

HENRY C. TRIPP.

Witnesses:
H. E. CHASE,
HOWARD P. DENISON.