A. T. NEWELL.

DUMPING WAGON.

APPLICATION FILED JUNE 20, 1908.

936,022.

Patented Oct. 5, 1909.

2 SHEETS—SHEET 1.

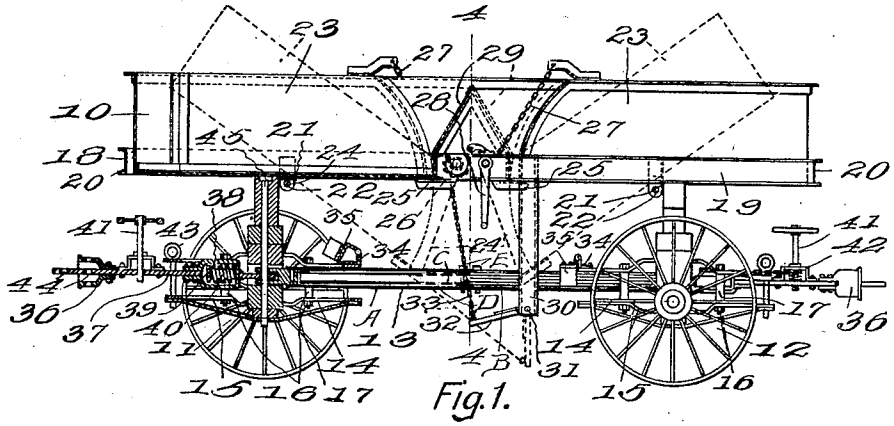

Fig. 1.

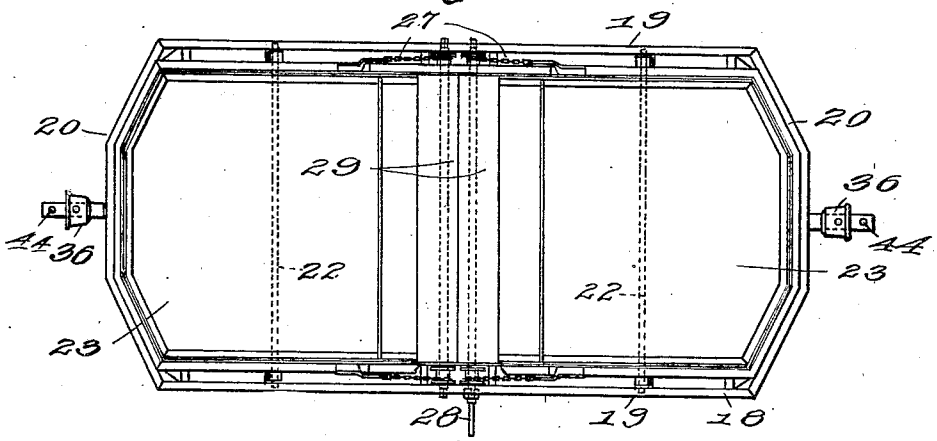

Fig. 2.

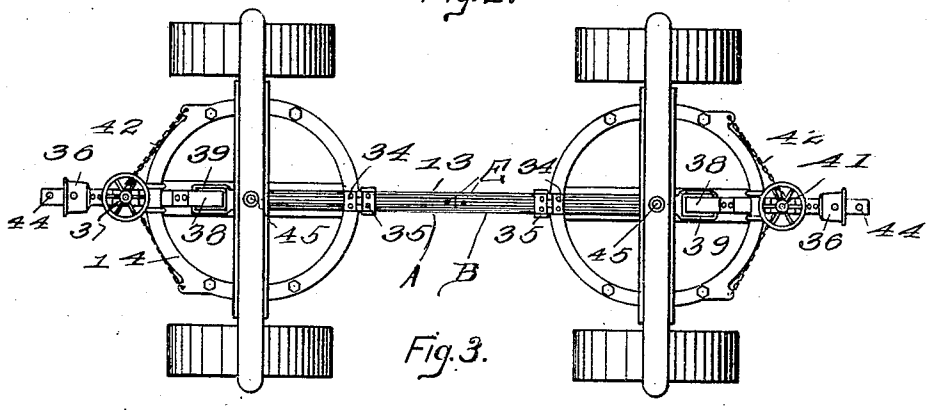

Fig. 3.

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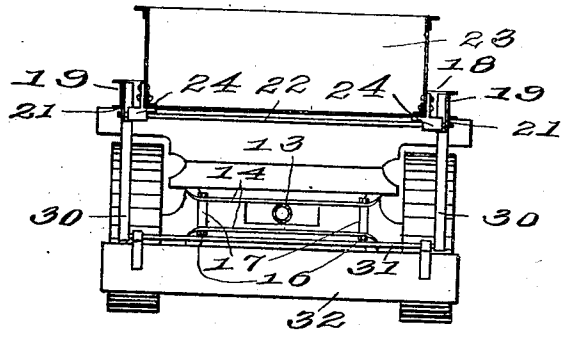
2 SHEETS—SHEET 2.

Fig. 4.



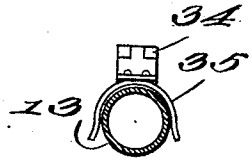


Fig 6

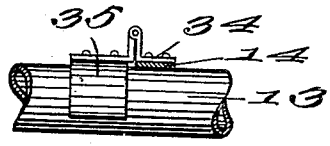


Fig. 5.

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UNITED STATES PATENT OFFICE.

ALFRED T. NEWELL, OF BIRMINGHAM, ALABAMA.

DUMPING-WAGON.

936,022. Specification of Letters Patent. Patented Oct. 5, 1909.

Application filed June 20, 1908. Serial No. 439,547.

To all whom it may concern:

Be it known that I, ALFRED T. NEWELL, citizen of the United States, residing at Birmingham, in the county of Jefferson and State of Alabama, have invented certain new and useful Improvements in Dumping-Wagons, of which the following is a specification.

This invention relates to dumping wagons, and has for an object to provide means whereby the contents of said wagon may be dumped and spread while the wagon is moving, and also to provide a novel construction with respect to the body frame and tilting bodies.

With these and other objects in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawings wherein like numerals of reference indicate similar parts in the several views, Figure 1 is a side view of the wagon partly in section. Fig. 2 is a plan view of the body and frame. Fig. 3 is a plan view of the trucks. Fig. 4 is a cross sectional view on the line 4—4 of Fig. 1. Fig. 5 is a detail side view of the cuff. Fig. 6 is a transverse section therethrough.

Referring now particularly to the drawings, there is shown a dumping wagon 10 consisting of front and rear trucks 11 and 12, connected by a coupling pole 13 to be hereinafter more fully described. Each bolster is provided with a fifth wheel 14 consisting of spaced annular plates 15 secured together by bolts 16 which are passed through spacing sleeves 17, as shown. The trucks are thus arranged to support a channel iron frame 18 comprising parallel side bars 19 and end bars 20.

The side bars 19 adjacent to each truck are provided with depending brackets 21 in which are mounted the ends of cross rods 22. Tilting bodies 23 are provided with depending brackets 24 which are revolubly mounted upon the rods 22 and these bodies are held normally in a horizontal position by means of chains or similar flexible connections 24′, secured at one of their ends to angle iron members 25 carried by the bodies, and which have their other ends attached to revoluble rollers 26 secured at their ends in the side bars of the frame. The bodies are also provided with chains or the like 27 which are secured to the rollers 26. When it is desired to unload the wagon, the rollers 26 are revolved by means of suitable cranks 28 to wind the chains 27 thereon, which movement of the rollers, as will be understood, unwinds the chains 24′. It is obvious that upon rewinding the rollers, the chains 24′ effectively restore the bodies to their normal position. The bodies are spaced from each other by means of diagonally disposed web-plates 29 which run transversely across the middle of the frame to prevent the contents of the wagon spilling in the center space between said bodies. The rollers just described are each provided with a ratchet of any suitable form.

Channel iron beams 30 are connected at their upper ends to the side bars of the frame, and these beams extend at their lower ends beneath the coupling pole. The beams are connected at their lower ends by a rod 31 to which is hingedly connected a spreading board 32. The board extends the full width of the wagon, and is connected to one of the tilting bodies by means of a chain 33. As the body to which the chain 33 is attached is lowered, the spreading board is also lowered and by drawing the wagon along the road, the contents are distributed to the required depth.

It will be seen that by providing a fifth wheel at each end of the wagon, either end may be considered the front. Each fifth wheel is provided with a bracket 34, to which is hingedly connected a cuff 35. It will be understood that by disengaging the cuff at either end from the coupling pole, that truck adjacent to the disengaged cuff may be turned. When both cuffs are engaged with the pole, it is obvious that the wagon is held perfectly rigid, also, the draft in a wagon train is not carried through the body of the wagon, but directly through the coupling members 36 secured to draw bars 37. The draw bars are provided with yoke shaped inner ends 38 disposed for movement in the slotted heads 39 at the ends of the coupling pole. The draw bars are provided with springs 40 absorbing the jar incident to the starting of the wagon.

Each draw bar supports a revoluble shaft 41, around which is wound a chain 42 having its ends secured to the fifth wheel adjacent to said shaft, as shown. The fifth

wheel at each end of the wagon is provided with a removable pin 43 engaged in a passage formed in the draw bar adjacent to the wheel. Each draw bar is provided with a pair of passages 44, the innermost passage being disposed in line with passages formed in the coupling head. The coupling pole is pivotally engaged at each end to the trucks by means of vertical pins 45. By removing either of the pins 43 and turning the shaft 41 adjacent to the pin removed, the truck at that end may be turned or moved to assist in the coupling of two wagons that are not in the same line.

When a train of wagons are to be coupled together and it is desired to back, it becomes necessary to have the wagon rigid, therefore, the couplings of each wagon are lapped over each other, and two coupling pins are used at each point; thus making the coupling poles and couplings of the whole train one rigid piece, as will be understood, and the plurality of wagons are forced to back in a straight line.

From the description, it will be seen that a simple and effective dumping wagon is provided by means of which the contents may be dumped and spread as the wagon is moved along; also, the wagon may be run in either direction, thus saving considerable time in narrow roads which would require the wagon to be moved to a point where it could be turned. An ordinary traction engine may be attached to the wagon and it may be stated that the engine can be detached from one end of the wagon and attached to the other end, and by reversing the positions of the cuffs as described, the wagon is reversed, *i. e.*, the front end of the wagon is reversed in order that it may be drawn in an opposite direction.

The coupling pole is made in two sections A and B, and disposed within the pole, there is shown a pipe section C. The construction is such that the tilting bodies and the body frame can be lifted or removed from the bolsters, and by the provision of adjusting openings D made in the section C, the pole may be lengthened in order that the wagon may be used for hauling lumber and the like. Suitable pins E are provided for holding the sections A and B to the section C.

The construction of the wagon is such that the bodies may be independently tilted in order that one-half of the load may be dumped at a given place, as will be apparent. When the bodies are in a horizontal position, it will be seen that the load is supported by the bolsters of the wagon trucks, thus avoiding weight upon the rods 22.

What I claim is—

1. A dumping wagon having in combination a tilting body, and a spreader extending across under the body and pivotally connected to the frame of the wagon and supported in position thereby above the ground, and a cable connecting the spreader and the body and constructed to drop the spreader when the body is tilted to dumping position, said spreader when dropped being in position to scrape over and level the dumped material.

2. A dumping wagon having in combination a frame, inwardly tilting bodies mounted thereon, rigid supports depending from the sides of the frame beside the inner ends of the bodies, a spreader pivoted to said supports and arranged to swing up and down, out of contact with the ground, and means connected to the spreader, whereby the spreader is lowered, when said bodies are dumped, into position to scrape over and level the dumped material.

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

ALFRED T. NEWELL.

Witnesses:
Y. A. DYER,
E. T. MORRISON.