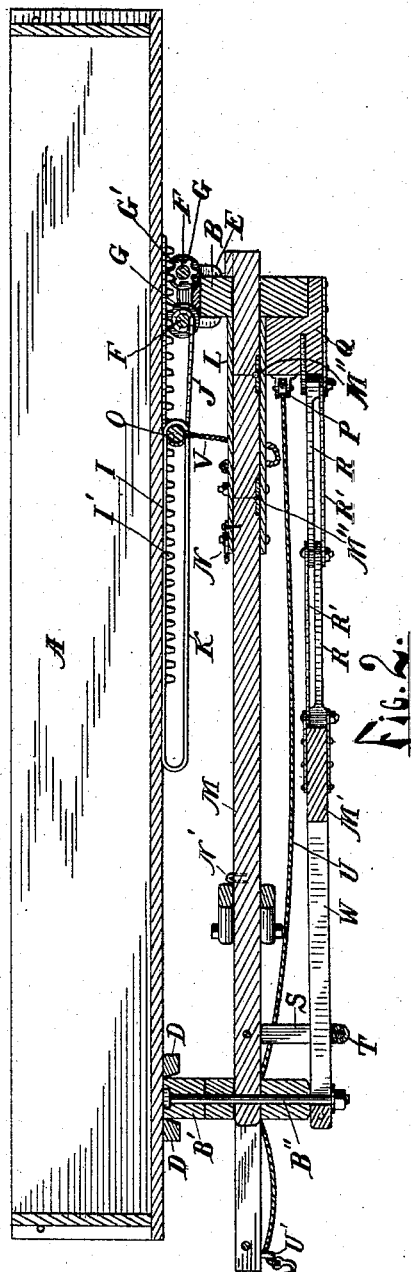
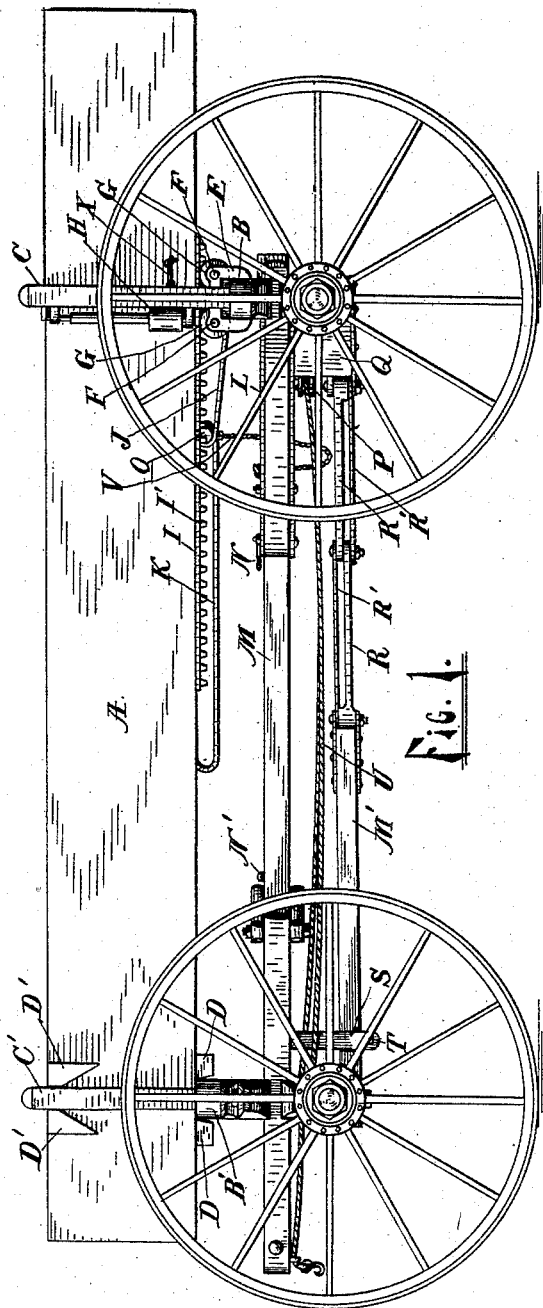


J. M. ROMANS.
DUMPING WAGON.

No. 489,987.

Patented Jan. 17, 1893.



WITNESSES:

Adm. J. H. Harvey
Charles J. Buchanan

INVENTOR

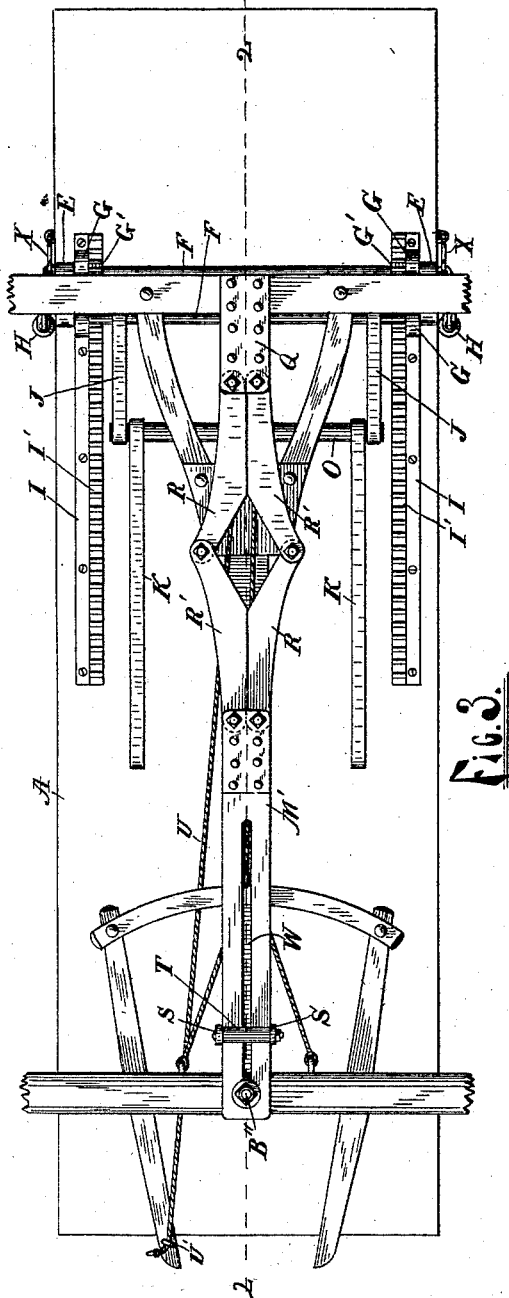
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UNITED STATES PATENT OFFICE.

JUSTUS M. ROMANS, OF WHITE CLOUD, MICHIGAN.

DUMPING-WAGON.

SPECIFICATION forming part of Letters Patent No. 489,987, dated January 17, 1893.

Application filed April 8, 1892. Serial No. 428,394. (No model.)

To all whom it may concern:

Be it known that I, JUSTUS M. ROMANS, a citizen of the United States, residing at White Cloud, in the county of Newaygo and State of Michigan, have invented certain new and useful Improvements in Dumping-Wagons; 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 wagons, constructed to dump their contents by projecting the rear end of the box beyond the rear axle, and lowering the rear end of said box; and its object its to provide the same with certain new and useful features, herein-after more fully described and particularly pointed out in the claims, reference being had to the accompanying drawings in which;

Figure 1 is a side elevation of a wagon embodying my device. Fig. 2 a longitudinal vertical section on the line 2—2 of Fig. 3, which figure is an inverted plan view of the said device.

Like letters refer to like parts in all of the figures.

A is the box of the usual construction, which box near its front rests upon the forward bolster B'; D, D, are cleats which engage said bolster at its respective sides, and D' D' are oppositely inclined blocks which guide and engage the stakes C' in said bolster. The rear end of said box is supported above the rear bolster B, by rolls G attached to transverse shafts F, which shafts are arranged at each side of, and parallel to said bolster, and journaled at their respective ends in bearing blocks E, which are extended downward at each side of said bolster, resting upon and embracing the same, by using two pairs of rolls one at each side of the bolster, there is less tendency to turn the same above the axis of the wheels, and strain the reach, and the box can be located lower down; said rolls G engage longitudinal tracks I secured to the under side of the box, and permit the box to traverse freely forward and backward over the rear axle, to prevent friction against the stakes C; rolls H are journaled on said stakes, which engage the respective sides of said box and to keep the box at right angles, to the bolster pinions C' are attached to the rear

shaft F which engage racks I', cast integral with the tracks I. Parallel links or straps K are attached to the under side of the box which embrace and are traversed by a transverse bar or rod O to each end of which is attached a rigid arm J, the opposite ends of which arms are journaled upon the forward shaft F. V is a stop chain or cord extending from said rod to the reach, which prevents said arms from turning about said shaft beyond a vertical position.

L is a box or casing surrounding the rear end of the reach M, and through which said reach is free to move longitudinally to permit the forward axle to approach the rear axle, and run the box A back over the rear bolster, a sufficient distance to balance said box upon the rear rolls G, when, by removing the rear end board and lifting the front of said box from the front bolster, the contents of said box may be discharged at the rear end. If necessary to raise the front still farther by engaging the hook N with the staple N' and starting both axles forward, the rod O will engage the forward ends of the straps K the rear end of the box being held by a portion of the load remaining in the same, and the front end of the box being empty the arms J, will turn to a vertical position on the shaft F and will lift the front of the box still farther. Said reach is divided transversely and hinged at M'' M'', so that its rear end may drop down out of the way of the box as it is tilted to dump its contents.

X, X, are hook fastenings which secure the box and prevent its moving back over the bolster B when occasion requires.

M' is a supplementary reach, that may be used to add strength and stiffness to the structure, this latter also illustrates other means for permitting the forward axle to approach the rear axle as before mentioned, this reach passes below the forward axle and is connected thereto by the king bolt B'', which passes through and traverses a slot W in said reach, which permits the forward axle to move back. S, S, are hangers depending from the upper reach, which embraces the lower reach, and T is a roll journaled between the said hangers engaging the lower side of the lower reach M'. This lower reach shows also a jointed section consisting of four

pairs of rigid bars, each pair marked R and R', two of which pairs are pivoted side by side to the rigid part M' of the reach and extending rearward engage each other, a part 5 of their length, and then curving outward in opposite directions, at their rear ends are pivoted to the forward ends of the other pairs, which extend in like form backward to a block Q attached to the rear axle to which 10 block they are pivoted; by curving these sections outward as described the joints do not come in line, and when the forward axle is moved backward, the middle joints will move outward in a horizontal plane and the end 15 joints approach each other.

P is a pulley attached to the forward side of the block Q around which passes the rope, or chain U, one end of which is fastened to the forward axle and the other end of which 20 extends forward through an eye U' on the hounds and is provided with a hook U'' to which the team may be attached. By pulling on this rope the team will be able to move the forward axle backward, when for any reason it cannot do so by backing up in the usual 25 way.

In drawing a load with this wagon, should the rear wheels get stalled, the forward wheels may be run back a short distance and then 30 by going ahead the box will move forward on the roll G together with the load, and by the inertia of the same will aid in starting the rear wheels, I can thus extricate the load that could not otherwise be moved.

35 What I claim is;—

1. In a wagon in combination with the box, the front and rear axles and the bolsters thereon; rolls on the rear bolster supporting the box; cleats on said box engaging the forward 40 bolster, and a reach connecting the said axles and provided with an intermediate portion, consisting of four sections hinged in pairs, to swing in a horizontal plane and permit the ends of said reach to approach each other, 45 substantially as described.

2. In a wagon in combination with the box, the front and rear axles and the bolsters thereon; and rolls on the rear axles supporting the box and traversing the under side 50 thereof, and cleats attached to said box and engaging said forward bolster, a box or casing attached to the rear axle, and a reach connected to the forward axle and provided with one or more joints near its rear end and longitudinally movable in said box or casing, 55 substantially as described.

3. In a wagon in combination with the box, the front and rear axles and the bolsters thereon, rolls on the rear axle supporting the 60 box and traversing the under side thereof, said box detachably secured to the forward bolster, a box or casing attached to the rear axle, a reach connected to the forward axle, and longitudinally movable in said box or 65 casing, and a supplementary reach, connected at its respective ends to the front and rear axles, and having jointed section pivoted to

swing in a horizontal plane, substantially as described.

4. In a wagon in combination with the box 70 and bolsters, bearing blocks on said bolster shafts journaled in said blocks, rolls on said shafts, tracks on said box engaging said rolls, rolls journaled in stakes at each side of said box and mechanism to longitudinally move 75 said box over said bolster, substantially as described.

5. In a wagon the combination of the front and rear axles of a box or casing attached to the rear axle, a reach attached to the forward 80 axle, said reach having a jointed rear end longitudinally movable in said box or casing, and a supplementary reach attached to the rear axle at its rear and having a slot at its forward end, said slot traversed by the king 85 bolt, substantially as described.

6. In a wagon in combination with the box and rear bolster, a shaft journaled on said bolster, rolls on said shaft traversing said 90 box, links or straps attached to said box and arms pivotally connected at their respective ends to said shaft and links or straps, and traversing the latter, and mechanism for moving said box longitudinally upon said rear 95 bolster, substantially as described.

7. In a wagon in combination with the box, bolsters and axles thereof, rolls on the rear bolster supporting said box, links attached to said box, arms pivoted to said bolster and links at their respective ends and traversing 100 said links, cleats on said box engaging the forward bolster, a casing attached to the rear axle, a reach longitudinally movable therein and attached to the forward axle, and a stop chain connecting said box and one casing, 105 and a fastening to temporarily secure said reach from moving in said casing, substantially as described.

8. In a wagon in combination with the box, bolsters, stakes and axles thereof, a shaft journaled on the rear bolster, rolls on said shaft 110 supporting said box, rolls on the rear stakes engaging the sides of said box, cleats engaging the forward bolster, and oppositely inclined blocks engaging the forward stakes, 115 links attached to said box, a rod traversing said links, arms attached at their respective ends to said rod and to said shaft, a casing attached to the rear axle, and a reach longitudinally movable in said casing, and attached 120 to the forward axle, a pulley attached to the rear axle, a rope attached to the forward axle, extending from thence around said pulley and thence forward to the front of the wagon, and adapted to attach to the team at its forward 125 end, substantially as described.

9. In a wagon, the combination of a box or casing attached to the rear axle, a reach pivoted to the forward axle at one end and longitudinally movable in said casing, and a 130 supplementary reach attached to the rear axle at one end and having a slot near the other end engaging and traversing the king bolt, substantially as described.

10. In a wagon the combination of a box or casing attached to the rear axle, a reach pivoted upon the king bolt near one end and having a jointed portion near the other end, 5 longitudinally movable in said casing, and a reach attached to the rear axle at one end, and passing below the forward axle at the other end and hangers attached to said upper reach and a roll journaled between said hangers and supporting said lower reach, substantially as described.

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

JUSTUS M. ROMANS.

Witnesses:

LUTHER V. MOULTON,
LOIS MOULTON.