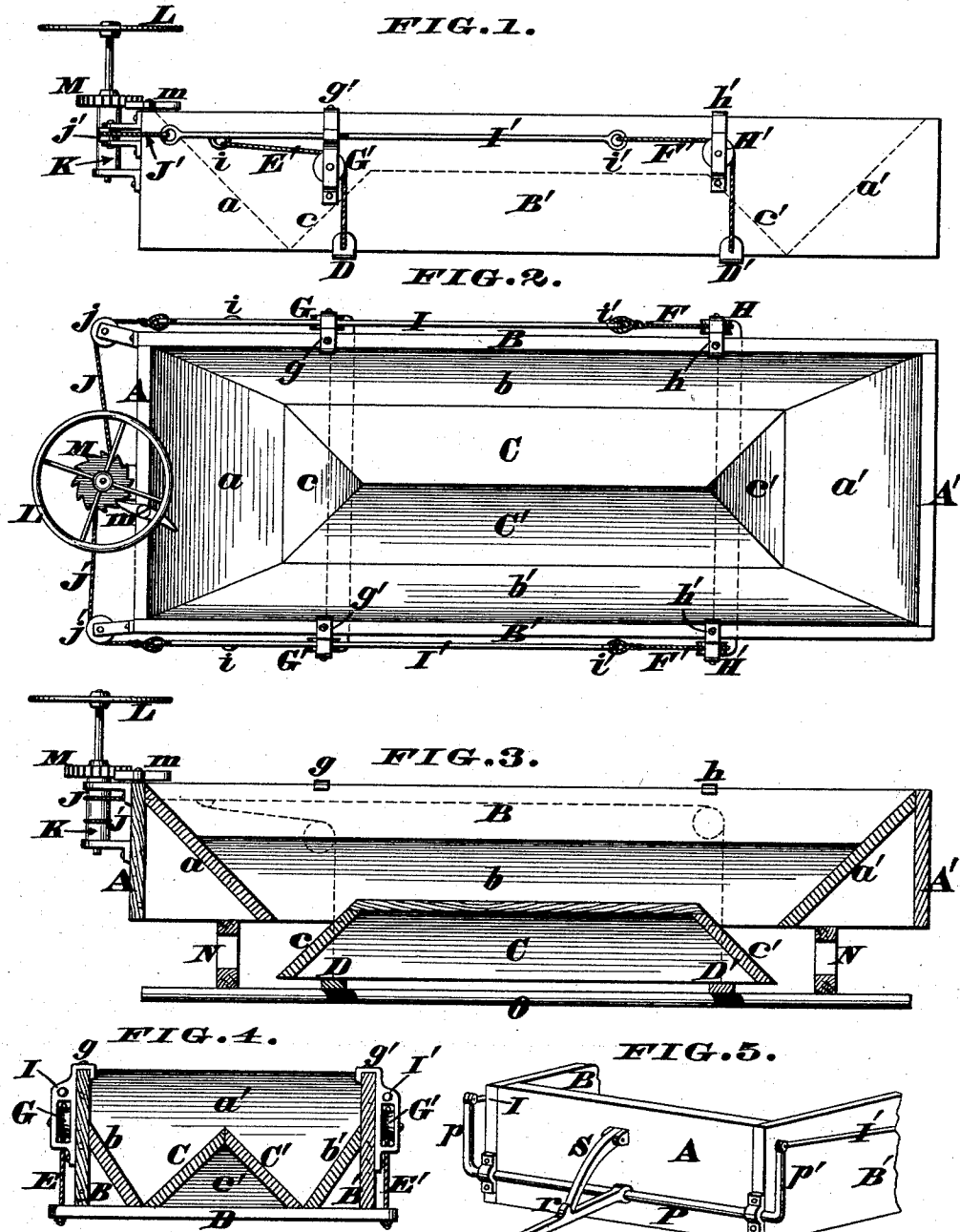


(No Model.)

L. E. JOHNSON.
DUMPING WAGON.

No. 522,987.

Patented July 17, 1894.



Attest.
Arthur More
Notary Public

Inventor.
Lewis Ernest Johnson.
By James J. Lowman,
Att'y.

UNITED STATES PATENT OFFICE.

LEWIS EVERETT JOHNSON, OF GREENSBURG, INDIANA.

DUMPING-WAGON.

SPECIFICATION forming part of Letters Patent No. 522,987, dated July 17, 1894.

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To all whom it may concern:

Be it known that I, LEWIS EVERETT JOHNSON, a citizen of the United States, residing at Greensburg, in the county of Decatur and State of Indiana, 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, reference being had to the annexed drawings, which form part of this specification.

My invention comprises a dumping-wagon, the bed of which slopes inward, both from its sides and ends, so as to cause the load to naturally gravitate toward the center of said bed, where it is retained by a single vertically-moving bottom having the shape of a double hip-roof, and being retained in its normal or elevated position by a system of chains and rods operated by a common windlass. But when the load is to be dumped, a pawl or other retainer is released, the windlass allowed to turn, so as to unwind the chains, and then this roof-shaped bottom descends bodily a sufficient distance, and causes a complete discharge of the contents of the bed, as herein-after more fully described.

In the annexed drawings, Figure 1 is a side elevation of the bed of my improved dumping-wagon. Fig. 2 is a plan of the same. Fig. 3 is a longitudinal section showing said bed mounted upon the bolsters of a wagon, and the bottom dropped to dump the load. Fig. 4 is a transverse section of the bed. Fig. 5 is a modification of the invention.

A, A', represent the front and rear ends of a wagon-bed, of any suitable size and material, and B, B', are the sides of said bed.

a, a', are inclined boards secured to the ends of the bed, and b, b', are other inclined-boards secured to its sides, these pieces a, a', b, b', being arranged at any suitable angle, so as to cause the load to gravitate toward the center of said bed, the movable bottom of the latter being composed of two planks C, C', united by ends c, c'. These planks C, C', c, c', are so fastened together as to have the shape of a double hip-roof that completely closes the only discharge opening of the bed.

D, D', are bars or bearers secured to this vertically-moving bottom C C' c c', which bars extend completely across the bed, and under

the same, and have their ends attached to four chains or wire ropes E, E', F, F', passing over rollers G, G', H, H', journaled in housings g, g', h, h', secured to the sides of said bed, in any suitable manner.

The two ropes E, E', are attached to eyes i, i, near the front ends of a pair of rods I, I', while the other suspenders F, F', are secured to the other eyes i', i', at the rear ends of said rods. Furthermore, these rods have other chains or ropes J, J', which, after passing around rollers j, j', at the front corners of the bed, are connected to a common windlass or shaft K. This windlass is journaled vertically in suitable bearings attached to the end A, of the bed, and carries a hand-wheel L and ratchet-wheel M, with which latter a pawl m engages.

N, in Fig. 3 is the front bolster of a running gear. N', the rear bolster thereof, and O a coupling pole that unites them, in the usual manner.

When the various operative parts of my wagon are in their normal positions, the chains J, J', are so coiled around the windlass K as to pull the rods I, I', forward, and thereby raise the bottom C C' c c', any retrograde turning of said windlass being prevented by engagement of pawl m with ratchet-wheel M. Consequently, this bottom completely closes an opening that would otherwise be formed in the wagon bed, and, on this account, said bed can be filled without danger of its contents being accidentally unloaded. Now, as the boards a, a', b, b', slope inward, it is evident the load has a natural tendency to settle at the center of the bed and lodge against the bottom C C' c c', which retains any gravel, sand, coal or other loose material capable of being carried in a cart or wagon. As soon, however, as the wagon arrives at a place where the load is to be discharged, the driver disengages the pawl m from ratchet-wheel M, and then the bottom C C' c c', instantly drops until its bearers D D', rest upon the coupling-pole O, as seen in Fig. 3. This drop may not exceed four or five inches, but it leaves a sufficient annular opening in the bed to cause a complete emptying of its contents, the outward slope of the bottom boards C, C', c, c', serving to deflect the load toward the sides and ends of the wagon. Therefore, the load

is very speedily dumped; but if it is desired to distribute gravel or broken stone along a road, the bottom can then be lowered a limited distance, and be held in place by engaging the pawl *m* with a proper tooth of ratchet wheel *M*. After the load is dumped, the bottom is brought up to its normal position by again winding the chains *J, J'*, around the shaft or drum *K*.

10 In the modification of my invention, seen in Fig. 5, the rods *I, I'*, are coupled to the ends of cranks *p, p'*, projecting from a rock-shaft *P* journaled in boxes secured to the front of the bed; a lever *R* being attached to said shaft, which lever is depressed to elevate the bottom *C C' c c'*. *S* is a pawl, coupled to the bed, and having its free end in contact with a tooth *r* of said lever. When this pawl is disengaged from said tooth, or other stop, the wagon bottom falls, and raises the lever *R*, accordingly. Again, the side rods *I, I'*, can be omitted, and the chains *E E' F, F'*, be carried directly forward to the windlass *K*, but this arrangement is liable to cause an entanglement of the links, and is not recommended, in all cases. Finally, the vertically-moving bottom may be a convex casting of any curva-

ture that will shed gravel or other material to the sides of the bed, but the ends of such a casting must be inclined, as at, *c, c'*. 30

I claim as my invention—

1. The combination, in a dumping-wagon, of a bed having inwardly-sloping ends and sides; a single vertically-moving bottom, having the shape of a double hip-roof that insures a discharge of the load both at the ends and sides of the vehicle, and devices for raising and lowering said bottom, and means for retaining it in an elevated position, for the purpose described. 35 40

2. The combination, in a dumping-wagon, of a bed having inwardly-sloping ends and sides; a single vertically-moving bottom capable of discharging the contents of said bed at its ends and sides; devices for raising and lowering said bottom; and means for retaining it in an elevated position, for the purpose described. 45

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

LEWIS EVERETT JOHNSON.

Witnesses:

JAMES H. LAYMAN,
ARTHUR MOORE.