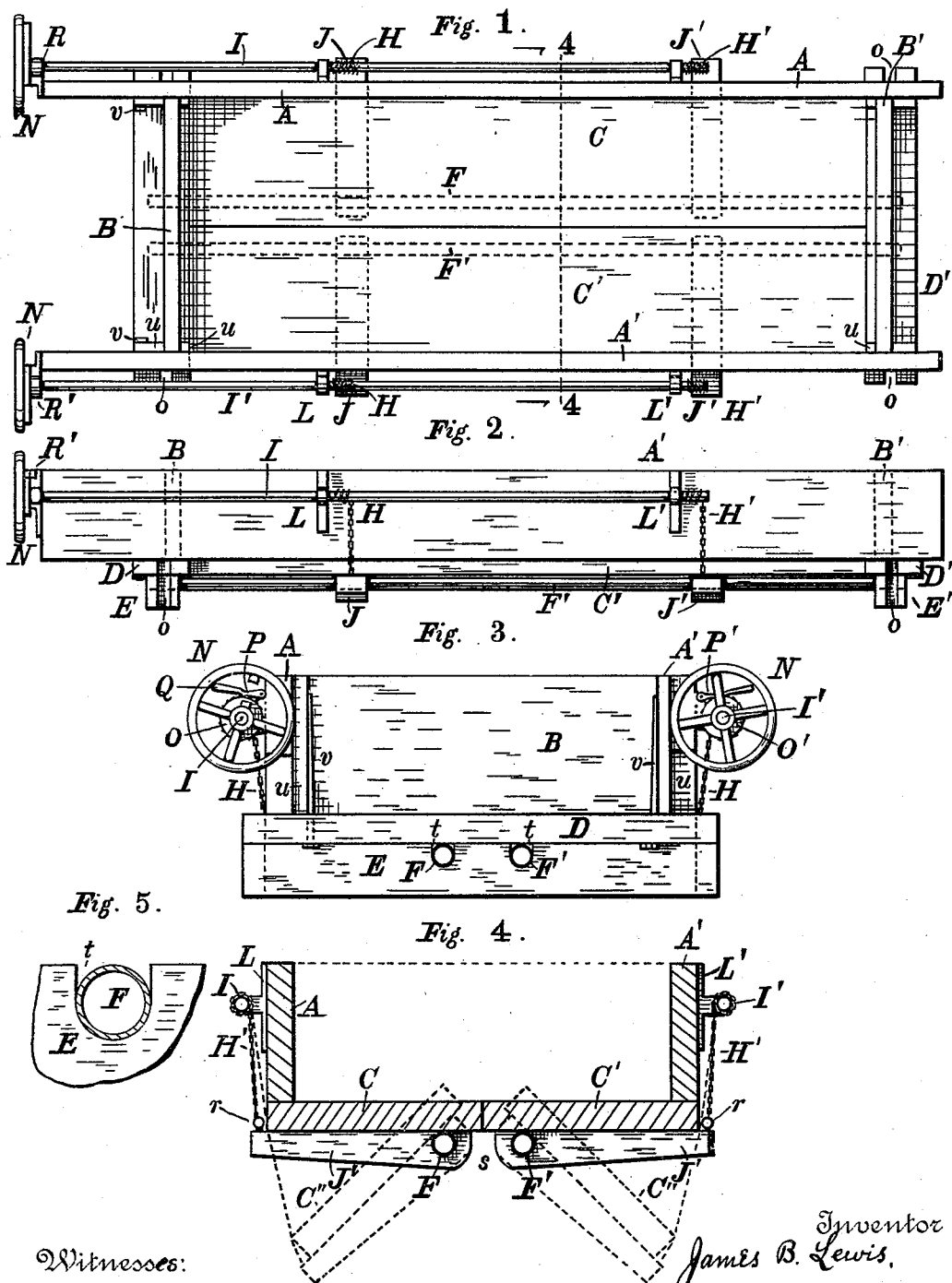


(No Model.)

J. B. LEWIS.
DUMPING WAGON.

No. 495,096.

Patented Apr. 11, 1893.



Witnesses:
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UNITED STATES PATENT OFFICE.

JAMES B. LEWIS, OF SCOTTSVILLE, NEW YORK.

DUMPING-WAGON.

SPECIFICATION forming part of Letters Patent No. 495,096, dated April 11, 1893.

Application filed November 13, 1891. Serial No. 411,788. (No model.)

To all whom it may concern:

Be it known that I, JAMES B. LEWIS, a citizen of the United States, residing at Scottsville, in the county of Monroe and State of New York, have invented certain Improvements in Dumping-Wagons, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to certain improvements in dumping wagons, having for its object the construction of a detachable wagon-body, with its bottom divided lengthwise and the sections pivoted on longitudinal rods supported by the bolsters, whereby the contents of the body may be quickly and conveniently discharged.

My improvements are fully described and illustrated in the following specification and the accompanying drawings, and the novel features thereof specified in the claims annexed to the said specification.

In the accompanying drawings representing my improvements in dumping wagons,—Figure 1 is a plan view of a wagon-body embodying my improvements. Fig. 2 is a side elevation of the same. Fig. 3 is a rear elevation of the same. Fig. 4 is a transverse section on the line 4—4, Figs. 1 and 2. Fig. 5 represents the manner of inserting the supporting rods in the lower bolster.

My improved body for dumping wagons, consists essentially of the sides A A', the end-boards B B' and the pivoted bottom-sections C C'. The body is supported on the bolsters D E, D' E', which rest on the usual bolsters of any suitable wagon, when the invention is in use,—the ends of the bolsters being provided with slots or notches, o o, for the reception of the ordinary stakes. It will thus be understood, that my improved wagon body may be used on any ordinary wagon, and that it may be readily applied thereto or removed therefrom,—being made of dimensions suitable for any particular case. The bottom sections C C' are supported by the rods F F' and the chains H H' attached to the rods I I', so that the outer edges of the sections, may be dropped downward, as represented by the dotted lines C'', in Fig. 3, for the purpose of discharging the load from the wagon body. It will be observed that the rods F F' are placed at a distance on each side of the cen-

tral line of the body,—the results being the partial balancing of the load on each of the bottom sections C C', so as to reduce the amount of the weight supported by the chains, and the avoidance of any construction resembling a hinge or joint at the center, which would become clogged by dirt or the material constituting the load. The bottom-sections have attached to their lower sides the cross-bars J J', through which the rods F F' pass, and which extend outward beyond the sections to afford room for the attachment of the bolts or eyes, r, to which the chains are connected.

The lower sides of the bottom sections C C', rest on the rods F F',—the holes in the cross-bars for the rods being made in such positions as to secure this result, whereby the sections are prevented from being bent downward by the load. The cross-bars are secured to the bottom sections by bolts or screws. It will be observed from Fig. 4, that the inner ends of the cross-bars are shortened, leaving a space between them as shown at s, Fig. 4 so as to permit them to swing upward without coming in contact with each other and for the purpose of allowing the material of the load to pass through between without clogging. The cross-bars J J' may turn on the rods F F', but I prefer that the rods themselves should turn in the notches t t in the lower bolsters E E'. These notches are formed as represented in Fig. 5, by cutting out a portion from the upper surface of the bolster so that the rods may be readily inserted or removed,—this arrangement providing for the removal of the whole body except the bottom sections at once,—the lower bolsters E remaining on the wagon after the bottom sections have been removed. The upper bolsters D D' are attached to the side-boards by the straps v v, which pass through the upper bolster and are provided with nuts below it,—their upper ends being secured either directly to the sides or to the cleats u which are used to hold the end boards in place. It will thus be observed that the upper bolsters are permanently secured to the body, so that they remain always at the same distance from each other,—thus preventing the bottom sections from jamming at the ends against the bolsters, and preserving their freedom of motion. It will also be observed

that the upper bolsters project inward a short distance inside of the end boards and the lower bolsters, so that the movable sections C C' cannot at any time come in contact with
 5 any of these parts. The cross-bars J J' are made tapering from the inner ends outward,—thus securing sufficient strength below the rods F F'.

The lifting rods I I' are attached to the
 10 outside of the side-boards A A' by suitable brackets, L L' in which they are arranged to turn. At one end,—preferably the rear,—the rods I I' are provided with the hand-wheels, N N, the ratchet-wheels O O', and the pawls P P'. As indicated in Figs. 1 and 2, the sides
 15 are extended beyond the end-board, and support the rods I I' by suitable brackets R R'. The object of this construction is to bring the hand-wheels out of the way of the wagon-wheels. The pawls, which may be provided with a handle Q, by which they are operated,
 20 are pivoted on the brackets R R'. The ratchet-wheel may be cast in one piece with the corresponding hand-wheel. The chains H H' are attached at their lower ends to the outer
 25 extremities of the cross-bars J J', and at their upper ends to the rods I I', by pins or screws. When the rods are turned in the proper directions, the chains are wound up on or un-
 30 wound from them, thus raising or lowering the dumping-sections C C'. When the sections are raised and the bottom of the body closed up, as shown by the full lines in Fig. 4, the chains are wound up on the rods, and the
 35 pawls P engage with the ratchets O, holding the bottom-sections in place against the sides of the body, and sustaining any load which may be placed therein. The rods F F' and I I' are conveniently made of pipes, as indi-
 40 cated in Fig. 5.

The manner of operating my improved dumping wagon will have been already understood from the preceding description. The load is dumped by disengaging the pawls
 45 from the ratchets on the side-rods, and allowing the outer edges of the bottom-sections to fall downward,—an operation which is easily formed even with a comparatively small hand-wheel, in consequence of the fact that a por-
 50 tion of the load is balanced on the supporting rods. The load having been dumped, the wagon is prepared for another load by turning the side-rods so as to wind up the chains thereon, and engaging the pawls with the
 55 ratchets, thus securing the bottom-sections in place against the sides in position to support any weight placed in the body.

My improved dumping wagon is cheap in construction and thoroughly durable and convenient in use, as I have demonstrated by
 60 practical trial.

I am aware that bottom sections have been pivotally supported near the longitudinal center of a wagon body bottom and such mat-
 65 ter is not broadly of my invention. In such prior constructions however the sections were hinged or pivoted at their rear edges so that

no counterbalancing effect of the load at the center was utilized as in my improvement; and furthermore the hinge or pivot supports
 70 required a central beam or roof shaped strip either to protect the joint or to support the hinges which beam obstructed the wagon body bottom. My sections are pivoted at a considerable distance from their rear edges
 75 which latter receive directly a considerable part of the weight of the load, and my supporting rods and the inner ends of cross bars J J' are normally separated a considerable distance to provide a clearing space *s* so that
 80 they are free from liability to obstruction at that point either in opening or in closing the sections.

I claim—

1. The herein described dumping wagon, 85 provided with a bottom divided lengthwise consisting of the movable sections C C', pivoted on the longitudinal rods F F' and with means for holding the bottom sections in place to carry the load, the rear edges of said
 90 sections extending back of the rods and being unobstructed above, whereby they sustain a part of the load to partially counterbalance the weight on their front portions, substan-
 95 tially as described.

2. The combination with the body of a
 100 dumping wagon, of the longitudinally divided bottom consisting of the movable sections C C', longitudinal rods F F', bolsters D D', E E', said bolsters D D' being attached to the
 105 wagon body and bolsters E E' attached to the running part of the wagon and means for holding the bottom in place to carry the load, substantially as described.

3. The combination with the body of the
 110 dumping wagon, the movable sections C C' pivoted on the longitudinal rods F F', and the bolsters D D' attached to the body and bolsters E E', provided with notches for the ends
 115 of the rods, whereby the body can be lifted from the sections and the latter from the bolsters E E', substantially as described.

4. The combination with the body of a
 120 dumping wagon, of the movable bottom sections C C', the longitudinal supporting rods F F', the cross bars J J' extending beyond the sides of the body, the bolsters D D' and bolsters E E', rods I I' flexible connections H H', and suitable ratchets and pawls, substan-
 125 tially as described.

5. The combination with the body of a
 130 dumping wagon, of the divided bottom consisting of the movable sections C C', pivoted on the longitudinal rods F F', arranged on each side of the central line, and the cross bars J J', having an open space *s* between their inner ends, said bars being shorter at their inner ends within the rods than the corresponding portions of the sections to leave a
 135 space *s*, substantially as described.

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