(No Model.)

G. W. RICHARDSON.

DUMPING WAGON BOTTOM.

No. 321,533. Patented July 7, 1885.

FIG. 1.

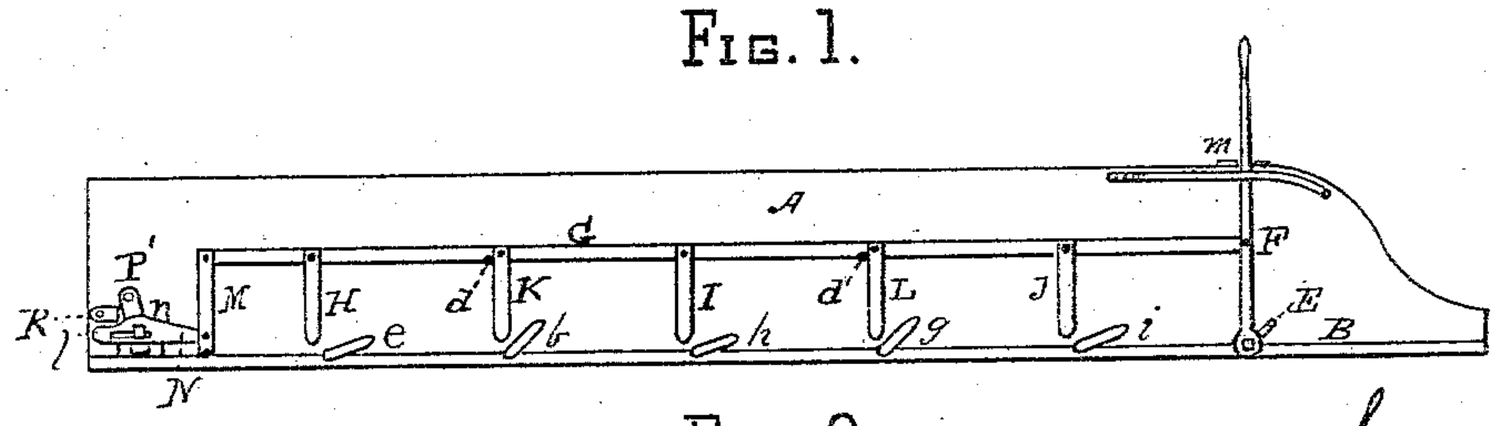


FIG. 2.

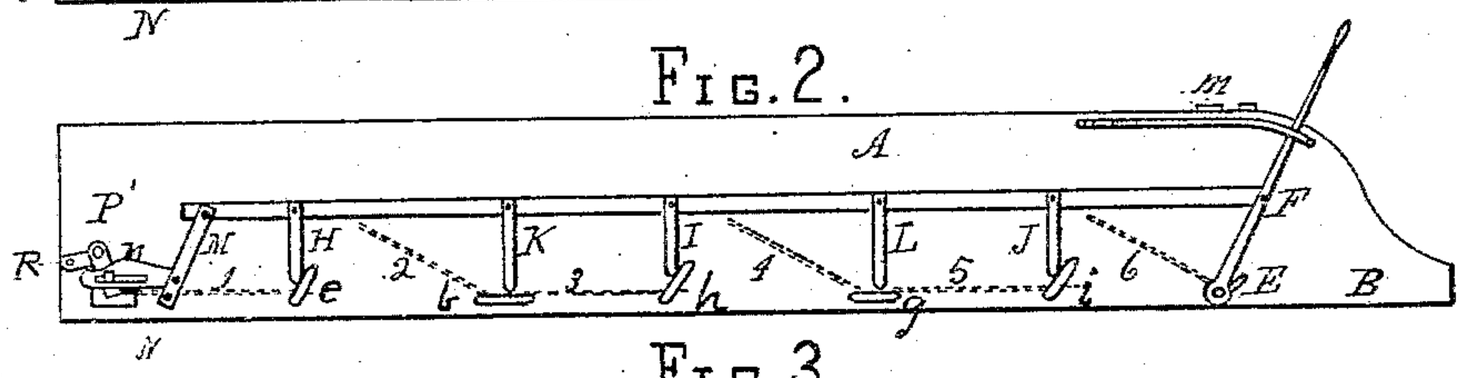


FIG. 3.

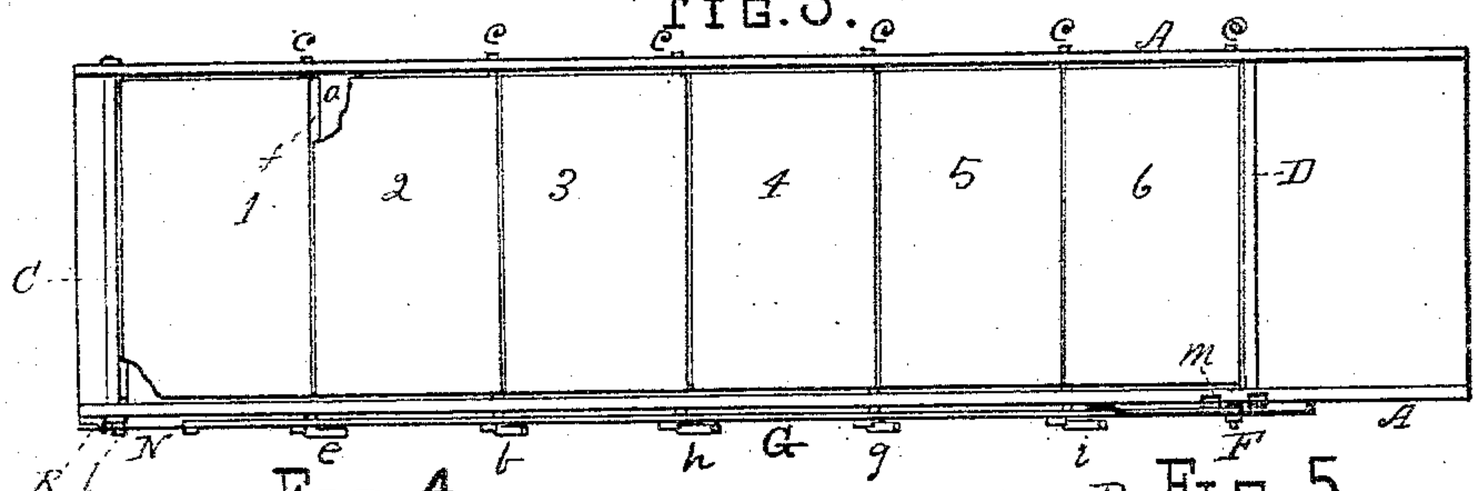


FIG. 4.

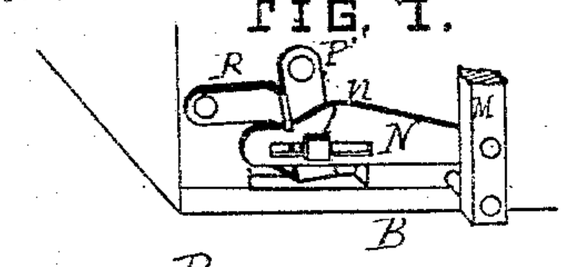


FIG. 5.

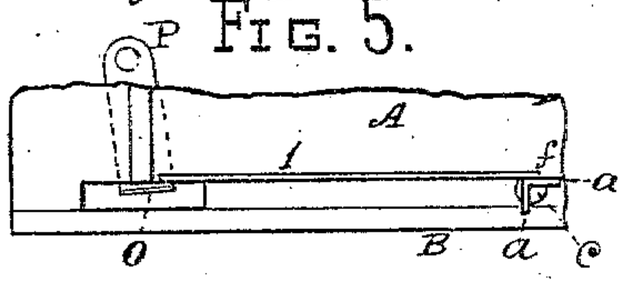
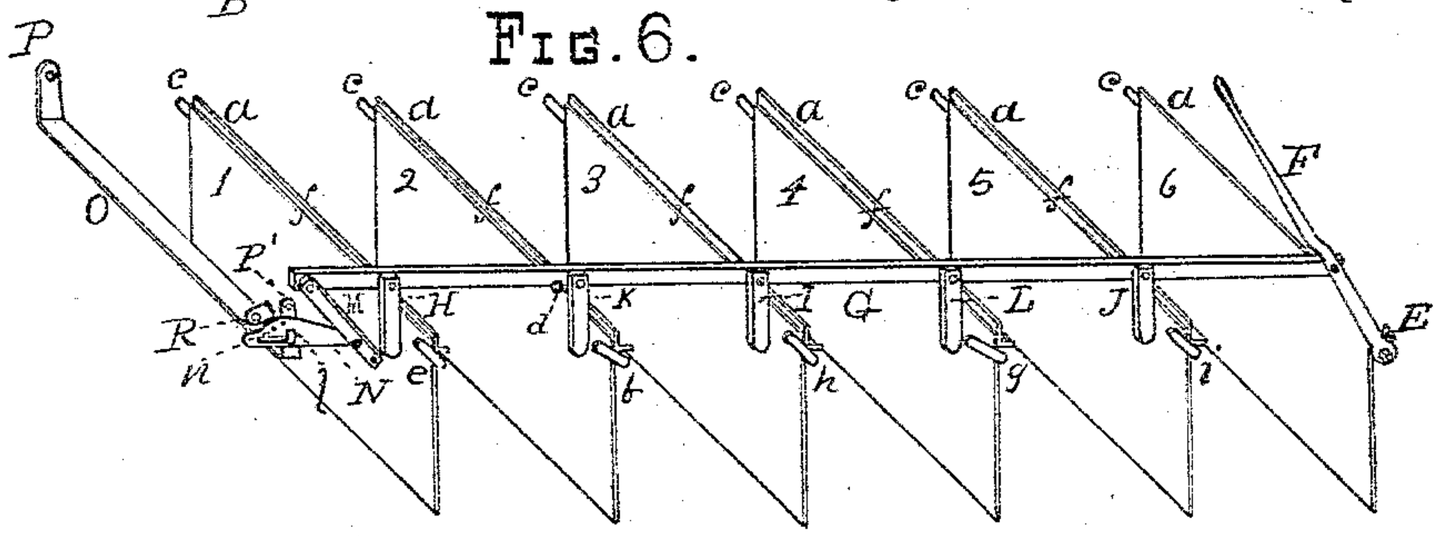


FIG. 6.



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DUMPING-WAGON BOTTOM.

SPECIFICATION forming part of Letters Patent No. 321,533, dated July 7, 1885.

Application filed February 24, 1885. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. RICHARDSON, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented new and useful Improvements in Dumping-Wagon Bottoms, of which the following is a specification, reference being had to the accompanying drawings, illustrating the invention, in which—

Figure 1 is a side elevation of a wagon-bed embodying my improvements; Fig. 2, a side elevation of the same with sectional bottom parts elevated and in position to fall into place to form a continuous level bottom; Fig. 3, a plan of the wagon-body with the sectional bottom closed; Fig. 4, an enlarged perspective representation of the devices employed to lock the rear sectional bottom plate; Fig. 5, a section of the rear portion of the body on line *x*, Fig. 3; Fig. 6, a perspective representation of the dumping devices removed from the body.

The present invention relates to an improvement in that class of dumping-wagon beds in which the bottoms are made in pivoted sections, so that they (the sections) may be suspended in vertical positions to dump the contents of the body; and the particular improvement consists in novel means for elevating the sections of the bottom by means of the same lever which is employed to dump the load.

Heretofore sectional bottoms have been pivoted to the bed of the wagon, and means have been provided for dropping the sections down to discharge the load thereon; but no means prior to my invention have been employed to raise the section except by hand, and as these sections are made of iron and fit each other closely it is difficult to rearrange them to form the continuous bottom; and, moreover, it is attended with danger, requiring an experienced hand of considerable strength. I overcome these objections by employing the same lever to replace the sections that is used to dump the load, and consequently avoid accidents and save both time and labor, inasmuch as the pivoted edge of one bottom section, except the forward one, supports the free edge of an adjacent section. I have found it best by certain specific mechanism first to bring the third and fifth sections up in advance of the other sections by means of certain devices on a connecting-rod, and at the same time bring up the forward section by the lever and connections therewith, and then after these three sections are above the ledges of the sections which are to support their free ends raise the other three sections to a level or a little above a level, and at the proper time during this movement move inward horizontally a lock under the rear end-board, and then release the lever partially to let the sections drop flat in place. The locks heretofore employed are on the bottom of the rear end-board, and have been hung to swing from their vertical positions, and therefore, as they are brought up, stone, chips, or dirt get in between the lock and end board and prevent the proper adjustment of the lock, and therefore it failed to support the rear section, and if that be not supported at its free end all the sections will fall down. It has been the custom heretofore to hang the sections of the bottom eccentrically with reference to their top flat sides; but by my devices I am enabled to hang them concentrically by the employment of ribs to sufficiently stiffen them to prevent buckling when under the weight of the load.

This attachment does not add anything of consequence to the weight of the wagon, but it adds greatly to the certainty of adjustment and convenience of use.

A represents the side of the body; B, the bottom frame-work, and C D the frame and rear end-board of ordinary construction. 1 2 3 4 5 6 represent the sectional bottom parts, which are made of iron plates and ribbed at *a*, to give to them suitable strength and form rabbets or ledges *f* for the free edges of the sections to have bearings on the pivoted edges of the adjoining sections. The sections are also provided with pivots *c*, for connecting them with the frame-pieces B of the body and for them to rotate upon. In practice these pivots may be combined with metal bearings bolted to the body.

F represents an operating-lever, which is hung free on one of the pivots. To the forward section, 6, of the bottom, and projecting out from this pivot, is a rigid arm, E, which is bent to engage the lever, so that at the proper

time in the movement of the lever it will come in contact with the arm and elevate the section 6.

A rigid clevis may be substituted for the arm E, and the lever made to operate inside thereof and perform the same function.

G represents a bar of iron, which is pivoted to the lever F, and has rigidly secured to it three cams, H I J, and two pivoted cams, K L. The latter cams are, however, free to swing only in one direction in consequence of stop-pins *d*, tapped into the bar G and made to project out far enough to engage the cams K L. The pivots at one side of the body are bent at right angles, as shown at *e b g h i*, that the cams H I J K L may operate against them and turn the sections 1 2 3 4 5.

Pivoted to the lever G and to the body is a lever, M, to which is pivoted a slotted bar, N, which, by means of the slot, engages the end *l* of a lock, O, the vertical arms P P′ of which are pivoted to the outsides of the body, so that the horizontal part O may slide back and forth under the rear end-board, C, and engage the under side of the free end of the rear section, 1.

To prevent the lock from sliding back after it is brought forward by the lever F, a button or stop, R, is pivoted to the body and operates against the arm P′. When the lever F is brought forward to release the sectional bottom, an elevation, *n*, on the slotted plate N raises the button up, so that the lock can be moved back by the said slotted bar.

A notched lock, *m*, is attached to the top of one of the sides of the body to support the lever F when the sectional bottom is closed; and, if desired, this may be a spring-lock, to prevent the lever from getting out of place by accident.

The operation is as follows: When the lever F is in the position shown at Fig. 1, the sectional bottom is closed to receive a load, and when brought back, as shown at Fig. 2, the sections 1, 3, and 5 will lie in about a level plane, and the lock O will be brought under the section 1, and the sections 2, 4, and 6 will be in position to drop to a level plane. The lever is now brought to the position shown at Fig. 1 and into its lock *m*, and all the sections will be closed. To dump the sections, bring the lever F back, as shown by dotted lines 2, Fig. 1.

I claim as my invention—

1. The bar G, in combination with the rigid cams H I J, pivoted cams K L, lever F, elbow-pivots *e b g h i*, and sectional bottom 1 2 3 4 5 6, as specified.

2. The lever F and bar G, in combination with the lock O P P′, slotted plate N, cam-shaped on its top *n*, lever M, and the button R, as specified.

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