(No Model.)

W. HULL.

DUMPING WAGON.

No. 290,686. Patented Dec. 25, 1883.

Fig. 1.

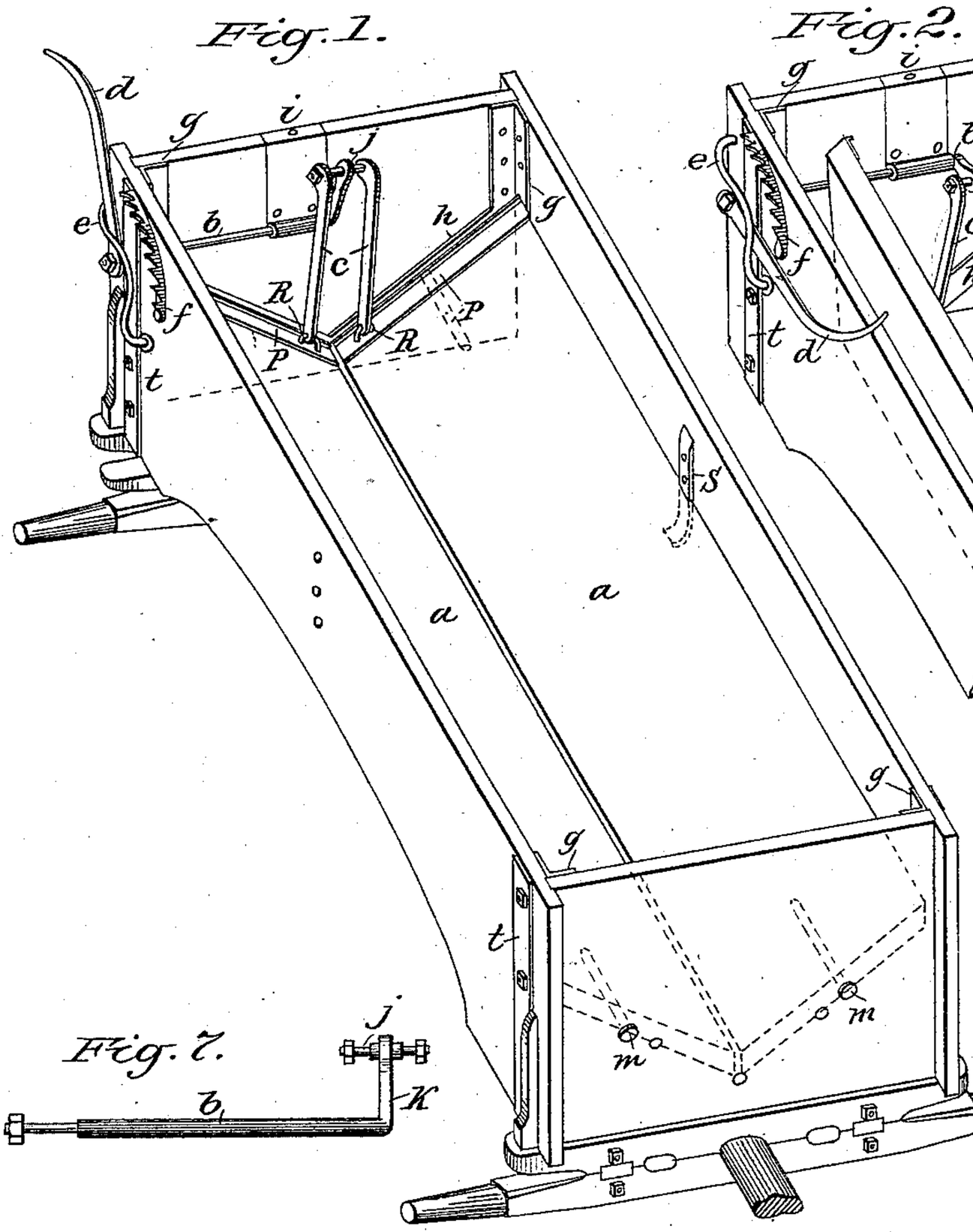


Fig. 2.

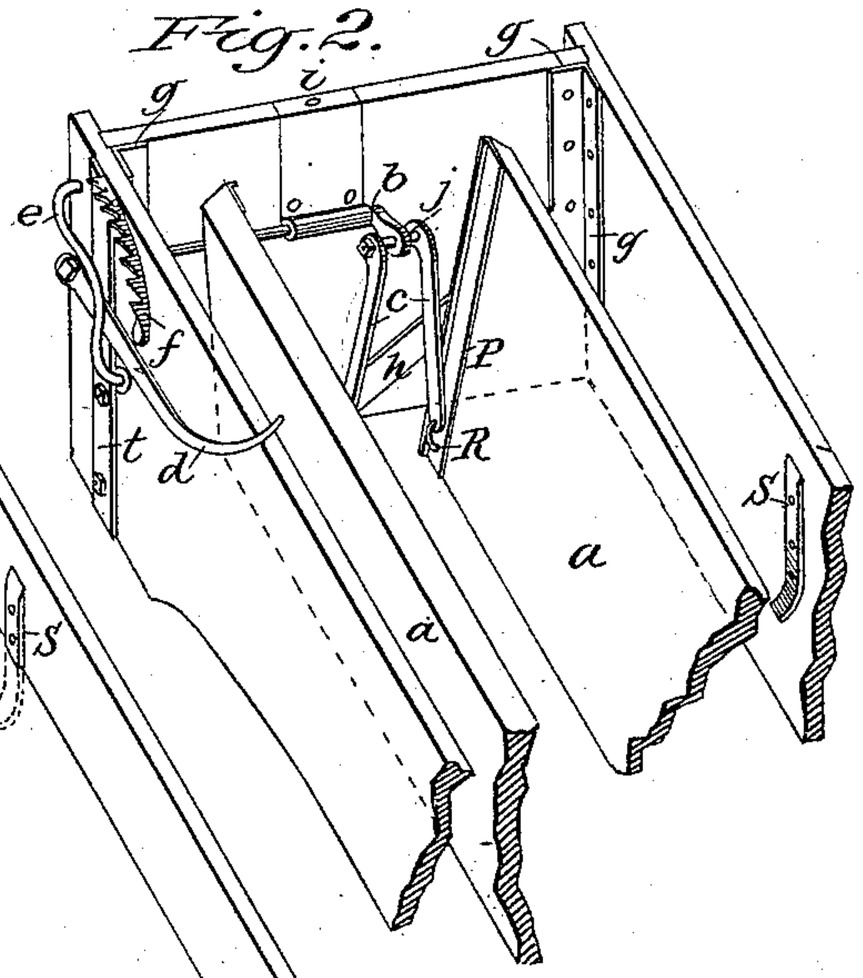


Fig. 7.

Fig. 6.

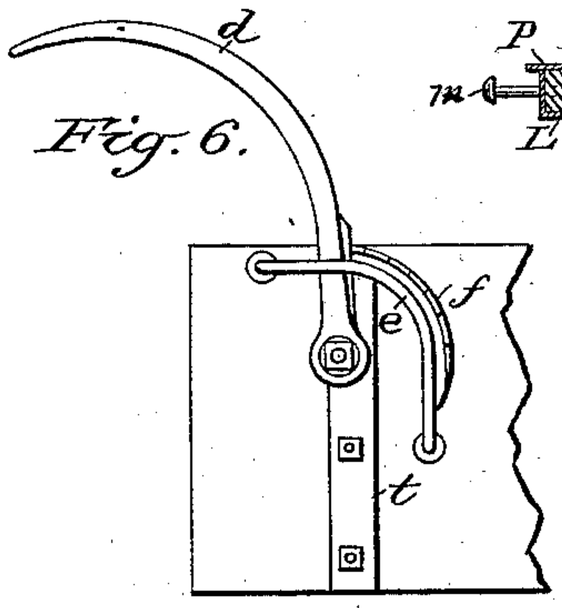


Fig. 5.

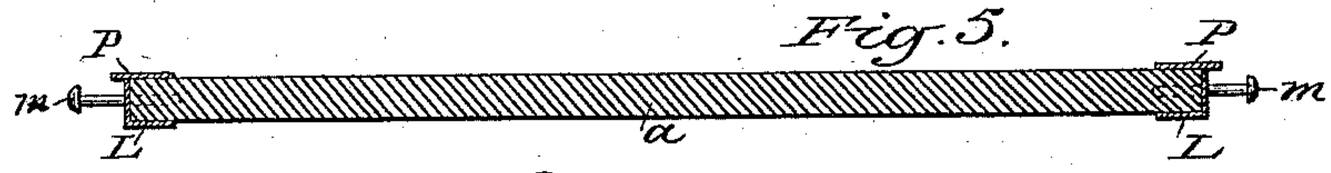


Fig. 3.

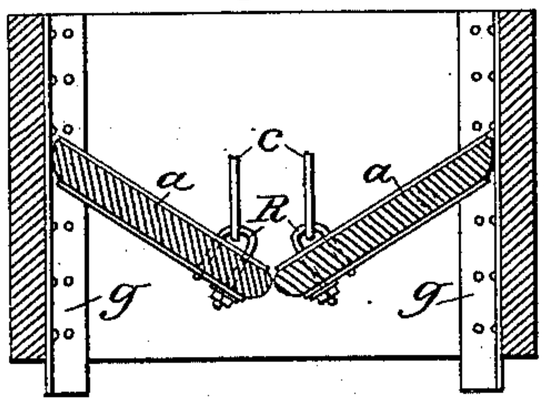
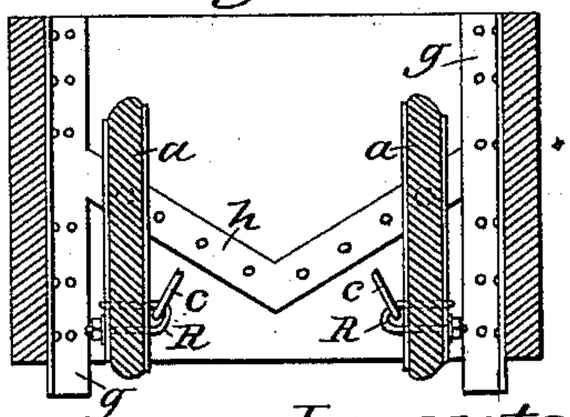


Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

WESLEY HULL, OF FORT WAYNE, INDIANA.

DUMPING-WAGON.

SPECIFICATION forming part of Letters Patent No. 290,686, dated December 25, 1883.

Application filed August 8, 1883. (No model.)

To all whom it may concern:

Be it known that I, WESLEY HULL, of Fort Wayne, in the county of Allen and State of Indiana, have invented a new and useful improvement in dumping-wagon boxes for dumping earth, gravel, and other loose material, of which the following is a specification.

My invention relates to that class of dumping-wagon boxes which discharge their contents through openings in the bottom.

The object of my invention is to provide a dumping-wagon box that cannot only be used on a wagon specially constructed for it, but also on an ordinary two-horse wagon when properly adjusted; and it consists in the construction of a dumping-wagon box the bottom of which is formed of two longitudinal sections, which meet in the center and are supported at each end upon journals or bolts which pass through the end of the box and enter said sections, upon which they are revolved by means of connecting-rods attached to them and the crank-arm of a shaft having an actuating-lever on its opposite end, by means of which said sections are revolved to a vertical position, allowing the load to drop through the openings thus formed, all of which will hereinafter be more fully described in the following specification, and accompanying drawings, in which like letters represent like parts in different figures.

Figure 1 is an oblique view of the box mounted on the wagon with bottom closed. Fig. 2 is an oblique view of a section of the box with bottom open. Fig. 3 is a transverse section of the box, showing the position of the sections of the box with bottom closed. Fig. 4 is a transverse section of the box, showing the position of the sections with box open. Fig. 5 is a longitudinal section of the one section of the bottom showing the projecting plate. Fig. 6 is a section of the front end of one side, showing the ratchet, guard, and lever. Fig. 7 is a plain detached view of the shaft and crank-arm.

In the annexed drawings, Fig. 1 represents my improved dumping-wagon box mounted on a wagon, the sides and ends secured together by means of a right-angled plate in each corner, which extends below the box, forming stays, as seen in Figs. 3 and 4, to keep it in proper position on the wagon. One side of said plate is secured to the ends of the box, while the side of the box is attached to the other side of the plate by means of screw-bolts and nuts, for easy adjustment and separation when necessary, as seen in Fig. 1. The bottom is formed of two longitudinal sections, *a a*, slightly inclined down to their inner edges, where they meet in the center of the box, with a view to lessen the distance to revolve said sections when dumping, and to allow the under edge of the side of the box or bed to be cut out, as seen in Fig. 1, in order to give more room for the wheels of the wagon in turning. A right-angled metallic plate, L, extends over the end and a short distance along the under side to strengthen said sections, the one on the end also acting as a bearing for the journal or bolt *m*, entering and supporting said sections, while the plate P on the upper side extends out beyond said section, as seen in Fig. 5, and rests against the ends of the box, as seen in Fig. 1, thus giving less room for the accumulation of material to obstruct its movement than if the ends of said sections extended entirely out, even with the top plate. The journals *m* pass tightly through the ends of the box and a plate inside, so as to retain them in position, and pass loosely into each end of the section, and through iron plates L, on the end near the center, to allow their easy movement. I do not confine myself to exact locations here shown. It may be necessary to vary in either direction to adapt it to the purpose intended or to the width of the wagon, my object being to keep as close to the inner edge of said sections as can be done, and not interfere with its successful operation, as the less the distance from the inner edge the less will be the height required at which to pivot the sections to swing clear of any obstruction below them. Consequently it requires less height of box and will be less difficult to load than when pivoted at or near the outer edge, as heretofore. Through said upper and lower plates, and near the inner edge of said sections, pass staples R R, with screw and nut on the lower end for adjustment when needed. The upper portion of said staple curves down from the longest portion, as seen in Figs. 3 and 4, transverse section, in such a manner as to allow the free movement thereon of the connecting-rods *c c*, attached thereto, in the act of re-

volving the sections. The other ends of said rods are each attached to a separate pin, J, on opposite sides of the crank-arm K of shaft *b*, which is supported by a clip, *i*, on the inner central part of the front end of the box, which acts as a boxing or bearing for said shaft, the other end of which passes through the side of the box near the corner, and through the plates *g* and *t* on each side, as seen in Fig. 1. The outer end of said shaft is flattened or squared, as seen, Fig. 7, to receive the actuating-lever *d*, with aperture to fit, and held in position for operating by means of a screw and nut on the shaft outside of said lever. When the bottom of the box is closed, the crank-arm stands up, as seen, Fig. 1, and the lever *d* stands about perpendicular until above the ratchet and box, when it curves forward and down to the end in such a manner that when the sections are revolved to a vertical position the crank-arm K stands down, and the end of said lever will extend above the side of the box, as seen in Fig. 2, within easy reach of the driver. When desiring to again close the box, said lever has a flange on its front inner edge inclining forward, which engages the corresponding teeth of a ratchet, *f*, secured to the side of the box, which holds the lever in position when the bottom of the box is closed, ready to receive the loading. The lever when above the ratchet stands about perpendicular, with its flange engaging one of the teeth near the upper end of the ratchet, as seen, Figs. 1 and 6, holding it secure and keeping the bottom of the box closed, and is held from becoming disengaged when not desired by means of a guard, *e*, passing outside of it in range of said ratchet. This guard, near its lower end, where it is secured to the outside of the box, is made flat and thin to act as a spring, so that when forced out at its opposite or upper end it will spring back and retain the lever in position. The upper end of said guard is bent at right angles and passes loosely through the side of the box, the extreme end bent or enlarged at a short distance from the side of the box, to allow its outward movement to the required distance to disengage the lever from the ratchet and limit its motion, as seen, Fig. 2.

In the act of dumping it is only necessary to force the lever out against the guard until it becomes disengaged and reaches its lower end, by which time the section will stand in nearly a vertical position, as seen, Figs. 2 and 4, when the material loaded will drop through the opening thus made, and the bottom can be instantly closed by raising the lever, and all can be done without stopping the team. As the lever controls the opening and closing of the bottom, to dump the load in several places it is only necessary to throw the lever back sufficient to allow the requisite amount to drop through, and then close by means of the lever, which may be held by the hand or ratchet while discharging the contents.

On the inside, and at the center of the box, are secured supports *s s*, which extend to the lower edge of the box, where they curve out and pass under the outer portion of each section, supporting it when closed, but not of sufficient length to interfere with them in the act of dumping. When necessary, said sections may be strengthened by means of iron or wood supports or braces running parallel with them on their under side near their inner edge. (Not shown in drawings.)

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a dumping-wagon box, the bottom formed of two inclined longitudinal sections, pivoted within said box on journals or pins, which pass through each end thereof and enter each end of said sections at or toward their center, in combination with said journals and box with under-curved sides, substantially as and for the purpose specified.

2. In a dumping-wagon box having the sections pivoted within it, the mechanism and its arrangement within the box to revolve the inclined sections, consisting of two connecting-rods attached to said sections by means of adjustable staples near their front ends and inner edges, the other ends of said rods attached to the crank of the shaft in clip I, in combination with said clip as secured to the inner central portion of the front end of the box and the bent actuating-lever on the other end of the shaft outside of the box, by means of which the two inclined sections are revolved on journals near the center of each end thereof, substantially in the manner, and for the purpose specified.

3. The spring-guard, which passes over the outside of the actuating-lever, in combination with the ratchet and lever, substantially as and for the purpose set forth and described.

4. The right-angled plates and the projecting plates on the ends of the sections, in combination with said sections and journals or bolts on which they are pivoted, substantially as set forth and described.

5. The supports on the inside of the box, which curve out and extend under and support the sides of the sections, in combination with said sections and box, substantially as and for the purpose specified.

6. In a dumping-wagon box, the right-angled connecting-plate *g*, which also acts as a bearing for shaft *b*, and extends below the box to retain it in position on the wagon, in combination with said shaft and box, substantially as specified.

In testimony that I claim the foregoing as my own I affix my signature thereto in presence of two witnesses.

WESLEY HULL.

Witnesses:

CASIMIRE F. CORNEILLE,

FRANCIS SOLLIER.