

No. 615,598.

Patented Dec. 6, 1898.

G. M. WALLACE.

DUMP WAGON.

(Application filed Feb. 9, 1898.)

(No Model.)

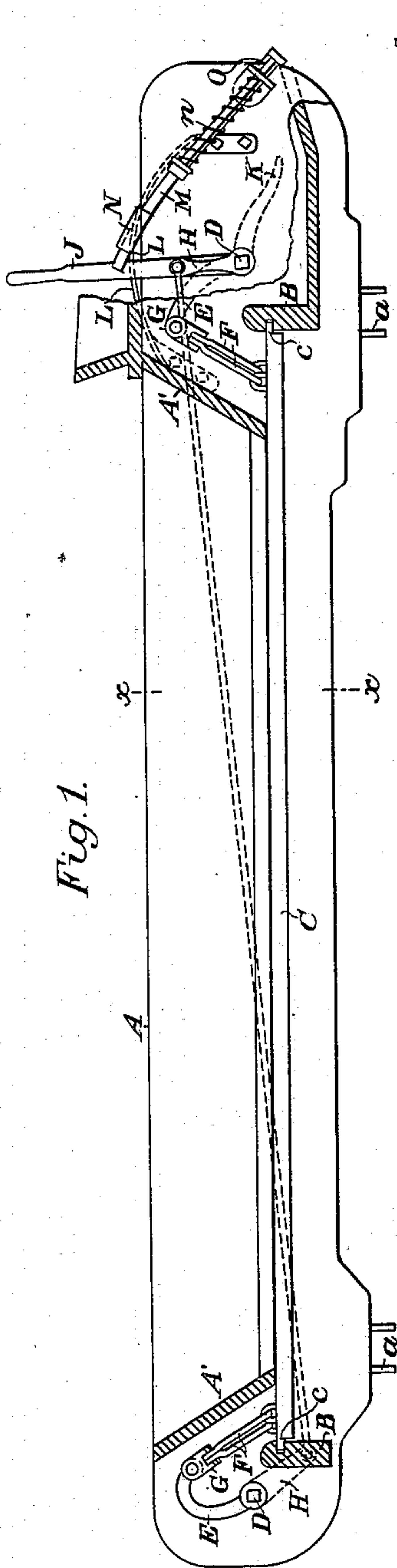


Fig. 1.

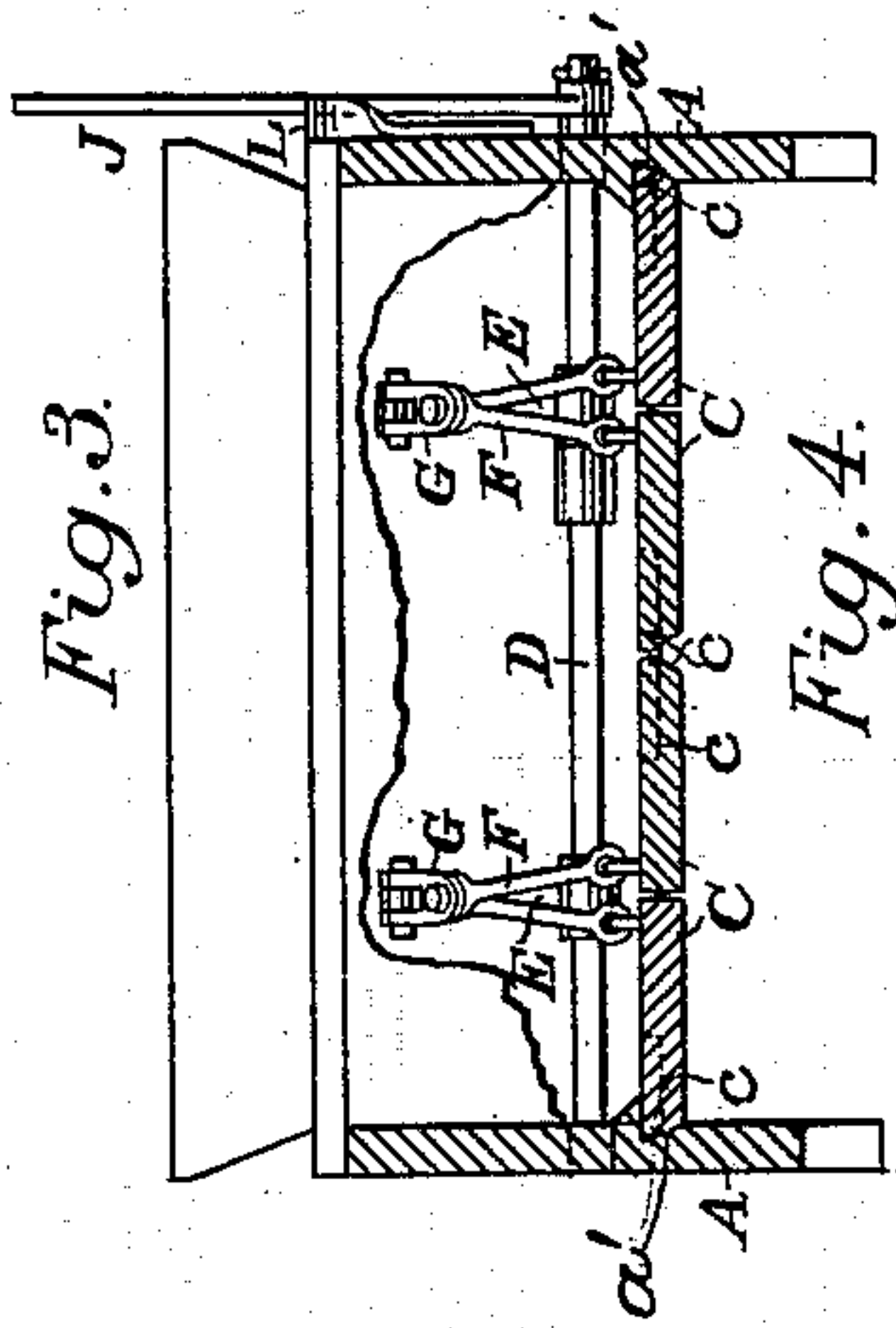


Fig. 3.

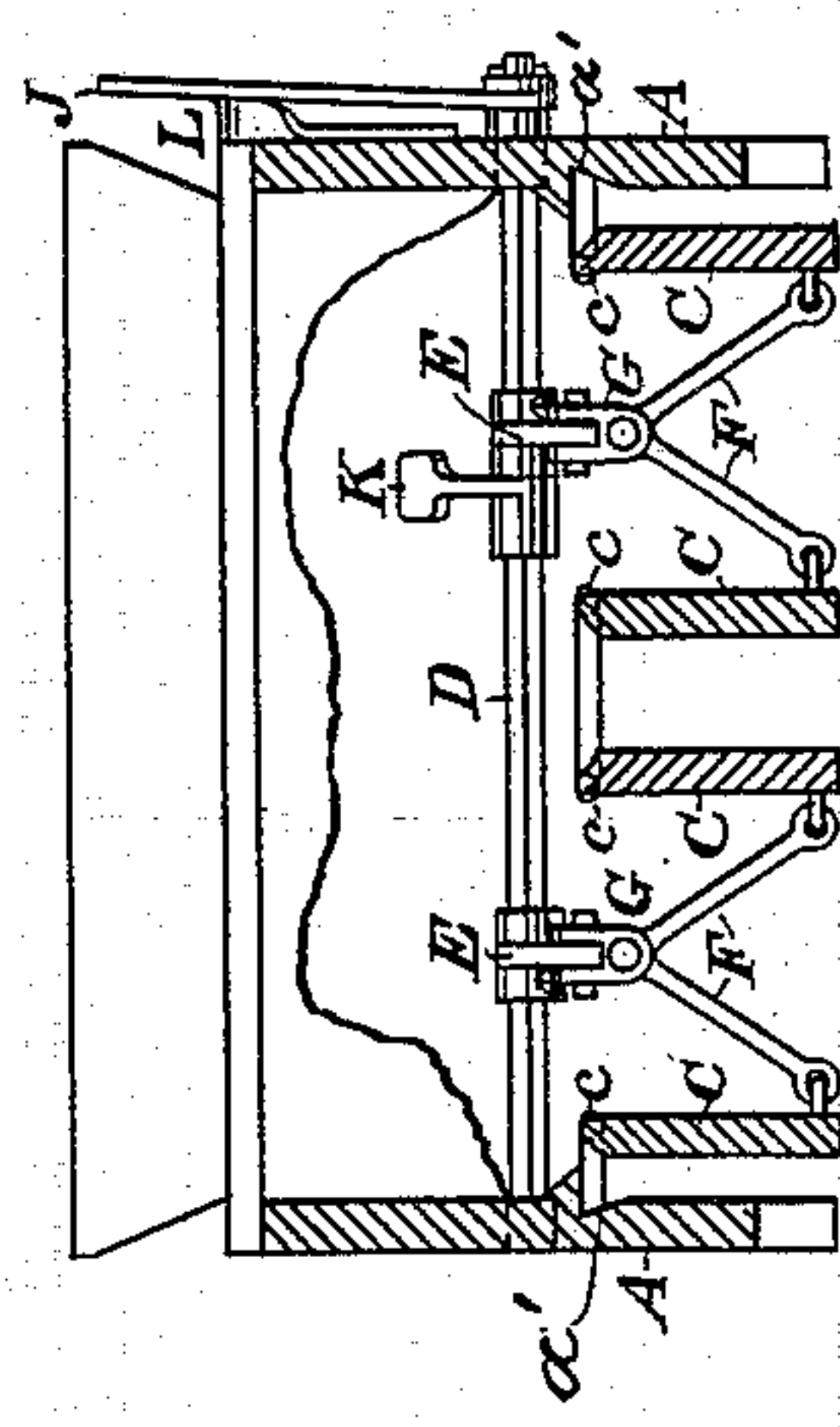


Fig. 4.

Fig. 2.

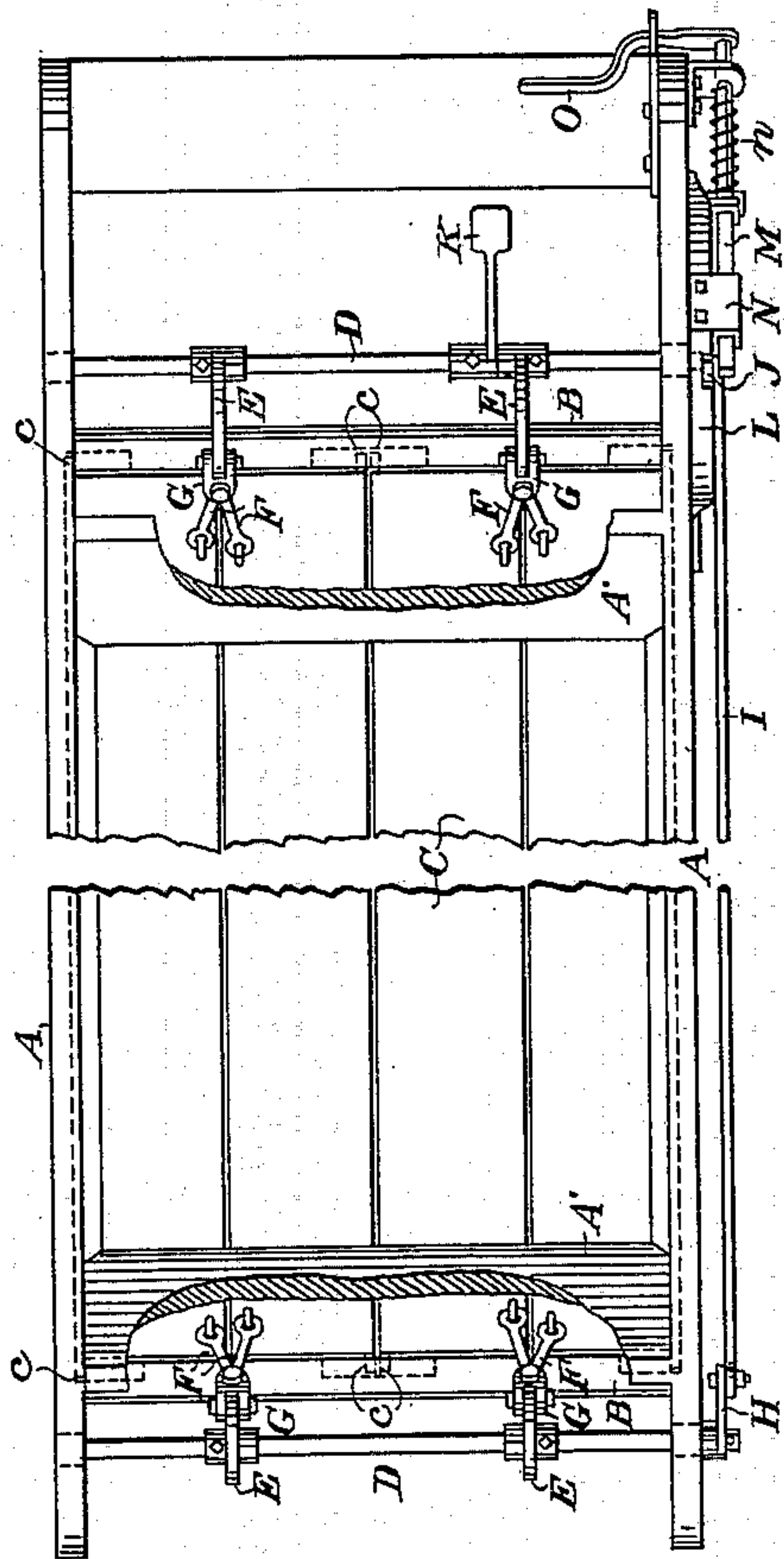
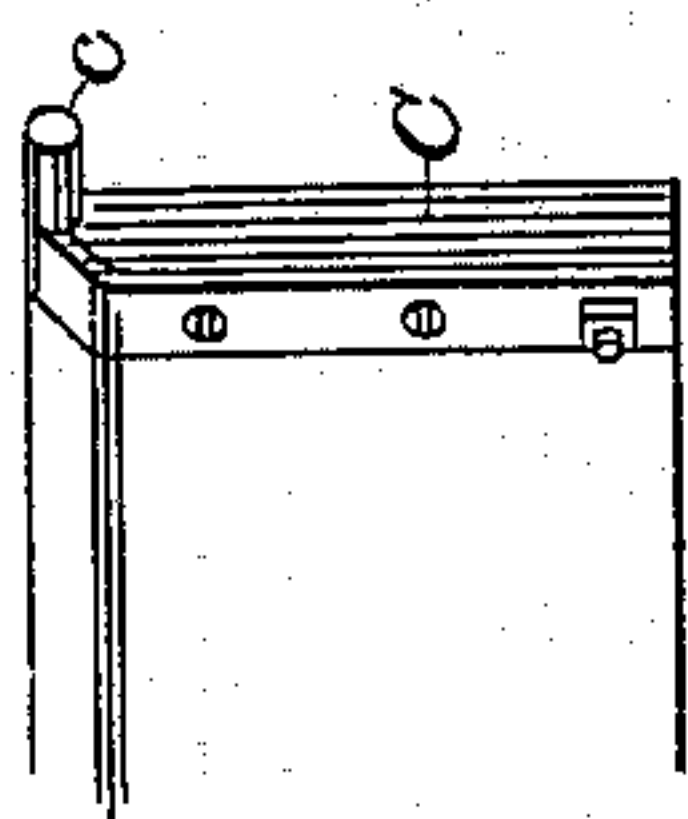


Fig. 5.



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UNITED STATES PATENT OFFICE.

GEORGE M. WALLACE, OF YUBA CITY, CALIFORNIA.

DUMP-WAGON.

SPECIFICATION forming part of Letters Patent No. 615,598, dated December 6, 1898.

Application filed February 9, 1898. Serial No. 669,619. (No model.)

To all whom it may concern:

Be it known that I, GEORGE M. WALLACE, a citizen of the United States, residing in Yuba City, county of Sutter, State of California, have invented an Improvement in Dump-Wagons; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to a wagon which is especially designed for carrying loads of earth or loose material and which is provided with a bottom adapted to be opened to discharge the load at any desired point.

My invention consists, essentially, in an improved means for suspending, opening, and closing the bottom boards, an actuating-lever and disengaging-lock therefor, and in details of construction, which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a longitudinal section. Fig. 2 is a plan. Fig. 3 is a transverse section on the line xx of Fig. 1. Fig. 4 is a similar view showing operation of my device. Fig. 5 is a detail view of one of the boards C.

My wagon is composed of sides A A, of any suitable or desired length, having transverse uniting-timbers B at the ends and may have closed ends A'. At the rear ends the sides have downwardly-projecting lugs or clasps a , which fit the rear axle or bolster of any wagon running-gear. The front end is similarly provided with wear-plates which rest upon the bolster at the front end of the wagon, the device thus being applicable to any wagon running-gear for which it is fitted and easily removable when the running-gear is to be used for other wagon-beds.

The bottom of the wagon is composed of boards C, having stout journal-pins c upon the opposite ends and adjacent to one edge of each of the boards. For large rocks, &c., the whole bottom may be made with two boards, meeting in the center when closed and opening the full width of the wagon for discharge. In the present case I have shown four of these boards, which are adapted to operate in pairs, the two pairs closing their adjacent edges together when they are brought into a horizontal position, the central edges of two of the boards meeting in the center, and the outer

side edges of the other two closing against the sides of the wagon-body.

The pivot-pins c are loosely fitted into grooves or channels formed transversely in the front and rear transverse timbers B, which connect the sides of the wagon, so that each of the boards is movable to the extent allowed by the length of the slots. This allows them to adjust themselves to discharge any loose gravel or dirt which may lodge between the boards and to allow of sufficient movement to bring them together when closed.

The outer edges of the outside boards are beveled or inclined downwardly, and the sides of the body, against which these edges fit, are also inclined upwardly, as shown at a' , so that when the boards are closed up horizontally to complete the bottom the edges of the outer boards contact with these beveled sides of the body, and any weight upon the boards which would tend to depress them would also, through the action of the beveled sides, force them inwardly, the slidable pivots allowing of this motion of the boards, and the result would be to close the meeting edges of all the boards closely together. The greater the load the closer the fit of the boards. The bottom boards themselves will open by gravitation whenever released, because of the pivots upon one edge.

Across the front and the rear of the wagon and, as here shown, outside of the end beams are journaled shafts D. These shafts have the lever-arms E fixed to them, one of said arms being fixed upon each shaft in line with the meeting edges of the boards when they are closed. The shafts may be made in any suitable manner. I have found that square or polygonal iron, to which the arms are fitted, is a very convenient way, as the arms can then be moved to the desired point and will then turn with the shafts. These arms are connected with the bottom boards by bars or hangers F, the lower ends of each pair of hangers connecting with the edges of the two bottom boards, which are to swing together when closed by means of eyebolts or any suitable loose attachment. The upper ends of these hangers connect with the lower end of a loose swinging link G, having a slot or channel made transversely, in which the upper

ends of the bars meet and are pivoted. This allows the lower ends of the bars to swing outwardly and diverge as much as may be necessary to insure a free opening of the boards. The links G have the upper end 5 slotted longitudinally or in the line of the suspending arms, to which they are pivoted, and this allows the links to swing forward and back and adjust themselves to the movement of the arms by which they are actuated 10 and also to the movement of the bars which connect them with the swinging boards.

In order to properly open and close the boards, the outer ends of the shafts upon one 15 side have crank-arms H, and these arms are connected by a rod I. The rear crank-arm stands below the line of its shaft and the forward one above the line of its shaft, so that when by means of a lever J the cranks are 20 turned both of them will be raised outwardly and will lift the swinging free edges of the bottom boards until they are brought together. In the present case I have shown two levers for operating these devices. One 25 may be a hand-lever, as J, and the other a foot-lever, as shown at K, and, if desired, the hand portion of the lever J may be dispensed with, the lever K being sufficient to operate the device by, while the lever J serves to lock 30 it as follows: The curved arc or segment L has a single notch made in it at the point where the lever J will stand when the bottom boards are fully closed. The lever J is made of sufficiently elastic spring-steel to be movable sidewise, so that when it reaches this 35 notch it can be made to drop into it. The manner in which this is operated is as follows: M is a spring-pressed bar slidable in guides N, and the upper end of this bar stands 40 with such relation to the notched segment and the lever J that when the latter is brought up toward a vertical position with the closing of the bottom boards it strikes the end of this slidable spring-pressed bar and forces 45 the bar back until the lever has arrived opposite the notch, and as it drops into the notch it moves out of the line of the slidable bar, which allows the spring *n* to immediately force the bar back alongside of the lever J, 50 thus locking it and preventing its disengaging from the notch of the segment.

From the bottom of the slidable bar a foot-piece O projects, so as to be within convenient reach of the driver, and when he desires 55 to dump the load it is only necessary to press upon this piece, thus retracting the slidable bar until it is disengaged from the lever, which will immediately spring out from the notch by reason of the weight upon the bottom boards, and the latter will swing down 60 into position to discharge the load.

The foot-lever K is useful to shake and rattle the boards in case any material clings to them, and they may also be closed up by its 65 use without handling the lever J at all, the latter then serving only as a lock, as before described.

By this construction the whole operation can be effected by the use of two foot-levers.

The tension of the spring *n* can be regulated by means of a nut turnable upon the 70 sliding bar, and this may be adjusted to suit requirements.

Having thus described my invention, what I claim as new, and desire to secure by Letters 75 Patent, is—

1. In a dumping-wagon, bottom boards having pivot-pins projecting from the opposite ends and at one side of each board, transversely-slotted timbers in which the pivot- 80 pins of the bottom boards are loosely movable, bars or hangers having the lower ends connected with the swinging edges of each pair of the boards and rotary shafts and levers the ends of which are connected with 85 the hangers and means for actuating said shafts.

2. A dumping-wagon comprising closed sides, transverse end beams, bottom boards having pivot-pins projecting from the opposite 90 ends near one edge so that said bottom boards swing to and from each other in pairs, transversely-slotted timbers in which the pivot-pins are loosely movable, transverse shafts journaled and turnable at opposite 95 ends of the wagon, having lever-arms projecting above the meeting edges of the bottom boards, links pivoted to the ends of said lever-arms and having transverse slots made in the lower ends, hangers, the upper ends of 100 which are pivoted in said transverse slots and the lower ends connected respectively with the swinging edges of the adjacent boards whereby the hangers freely diverge when the boards swing apart. 105

3. A dumping-wagon comprising fixed sides and ends, bottom boards hinged in pairs so that their adjacent edges swing apart, timbers having slots in which the pivot-pins of 110 the boards are slidable transversely, and inclined or beveled sides with which the exterior edges of the outside boards contact whereby the meeting edges of all the boards are forced together when closed.

4. In a dumping-wagon of the character described, the hinged swinging bottom boards, 115 actuating lever-arms and hangers, cranks upon the outer ends of the shafts connected together, a lever-arm fixed to one of said shafts, a segment concentric with the shaft 120 over which the lever-arm moves, a notch in said segment to engage the lever-arm when the bottom boards are closed together, a spring-pressed bar slidable in line with the lever-arm against which the arm contacts 125 just before the bottom boards are fully closed, whereby said arm is pressed backward against the tension of its spring, and the lever-arm allowed to fall into the locking-notch and disengage itself from said arm so that the latter 130 slides past the lever and retains it in the notch.

5. In a dumping-wagon having hinged swinging bottom boards and operating mech-

anism of the character described, a lever fixed
to one of the rotary operating shafts, a seg-
ment concentric with said shaft having a sin-
gle notch with which the lever will engage
5 when the bottom is fully closed, a slidable
spring-pressed bar which is forced back by
contact of the lever before the latter reaches
the locking-notch and which is forced for-
ward to hold the lever in place after it has
10 engaged with the notch, and a foot-piece con-

nected with the slidable bar whereby it may
be retracted and the lever released so as to
allow the bottom to open and dump.

In witness whereof I have hereunto set my
hand.

GEORGE M. WALLACE.

Witnesses:

S. H. NOURSE,

JESSIE C. BRODIE.