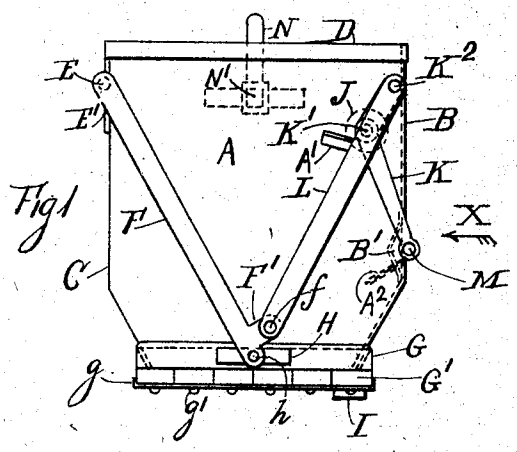
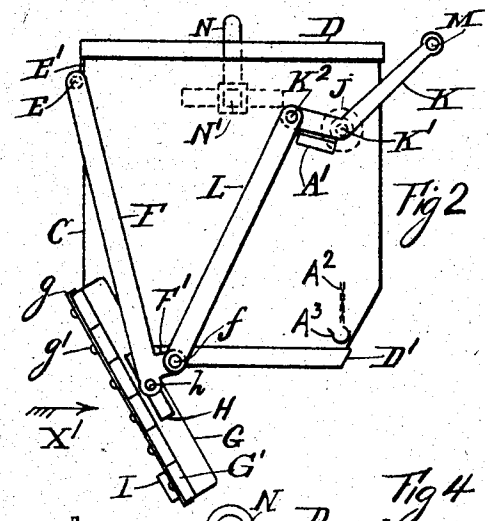
No. 796,264. PATENTED AUG. 1, 1905.

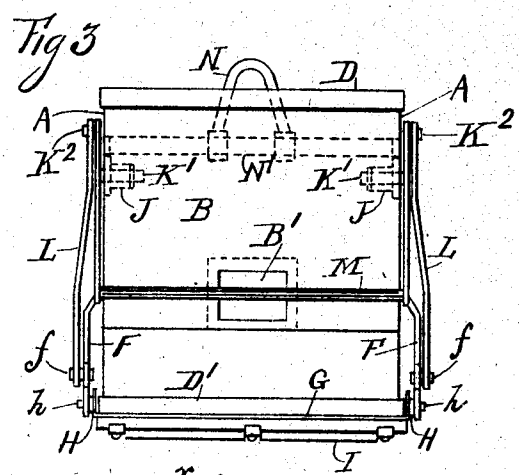
G. L. STUEBNER.

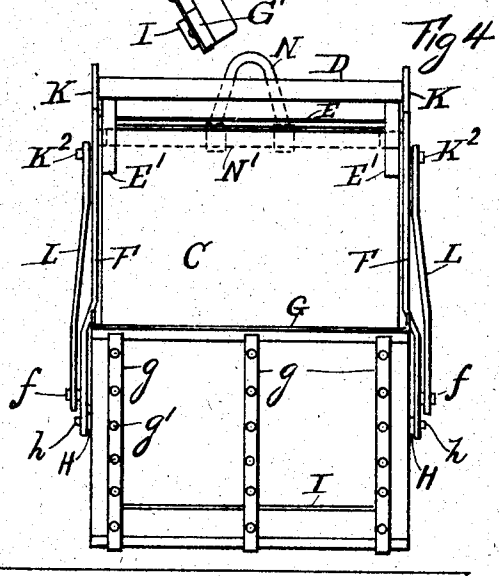
BOTTOM DUMPING BUCKET.

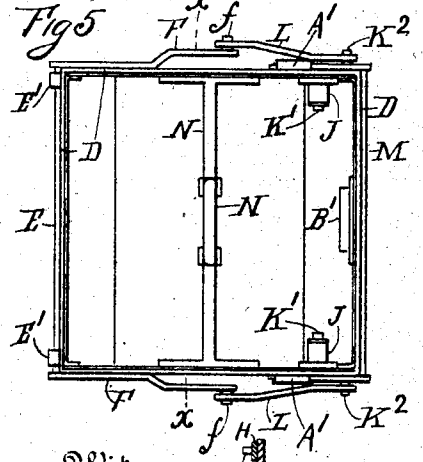
APPLICATION FILED FEB. 24, 1905.

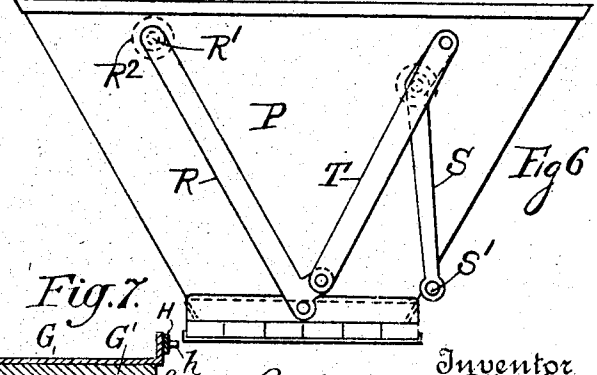


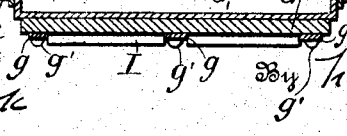












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UNITED STATES PATENT OFFICE.

GUSTAVUS L. STUEBNER, OF FLUSHING, NEW YORK.

BOTTOM-DUMPING BUCKET.

No. 796,264. Specification of Letters Patent. Patented Aug. 1, 1905.

Application filed February 24, 1905. Serial No. 247,181.

To all whom it may concern:

Be it known that I, GUSTAVUS L. STUEBNER, a citizen of the United States, and a resident of Flushing, in the county of Queens and State of New York, have invented certain new and useful Improvements in Bottom-Dumping Buckets, of which the following is a specification.

This invention relates to a bottom-dumping bucket useful for handling various kinds of materials, and especially concrete. Its organization comprises a bucket with a body of any desirable form and a bottom pivoted thereto in equilibrium, the disposition of the parts being such that the weight of the contents of the bucket maintains the bottom locked to the body thereof.

Referring to the drawings, Figure 1 represents a side view of a bucket with my invention and the bottom closed with the body of the bucket. Fig. 2 is a view similar to Fig. 1 after the contents of the bucket have been dumped. Fig. 3 shows an end view of Fig. 1 looking in the direction of the arrow X. Fig. 4 represents an end view of Fig. 2 looking in the direction of the arrow X'. Fig. 5 represents a top view of Fig. 1, and Fig. 6 shows a side view of a bucket having inclined ends and the invention applied thereto. Fig. 7 represents a section of the bottom of the bucket, as on the line x x of Fig. 5.

Referring particularly to Figs. 1 to 5 and 7, a bucket is represented with the body composed of the sides A, front B, and back C, the two latter inclining toward the center at their lower ends. A band D reinforces the upper end of the bucket, and a band D' is fitted to the lower portion thereof for the same purpose.

On the back C, at the upper portion thereof, there is journaled in bearings E' the cross-shaft E and from which extend the sustaining-links F. The bottom G of the bucket has extending from its sides the journal-brackets H, with their pivots h, the latter being on the center line of the bottom, and the ends of the sustaining-links have openings for the pivots h. The bottom G is represented as a U-shaped plate, reinforced with the blocks G', which latter are secured to the said U-shaped plate by the bands g and the rivets g', which bind the three latter elements together. Counterweights I are generally added to the front end of the bottom, as shown. From each of the sustaining-links F extends the leg F', with an opening in the end thereof.

At the upper front portions of the sides A and on the inside of the bucket are secured bearings J, and operating bell-cranks K have pivots K', which latter are supported in the said bearings J. Pivots K^2 extend from the upper ends of the bell-cranks K, which carry the connecting-links L, the lower ends of the links being pinned to the legs F' by means of pins f. The lower ends of the bell-cranks K are connected by the handle M. A pocket B' is formed in the front B to allow an operator to easily grasp the handle M. A bail N extends from a cross-brace N', which latter is fastened to the side of the bucket, and on the side of the bucket are fastened supporting-shelves A' for the short arms of the operating bell-crank K.

In Fig. 6 there is shown a bucket with sides P and inclined front and back. Sustaining-links R have pivots R', which latter are carried in bearings R^2, similar to the bearings J. An operating bell-crank S is connected to the bucket in a similar manner to the bell-crank K, the handle S being capable of passing over the end of the body of the bucket. Connecting-links T, similar to the links L, connect the operating bell-cranks and the sustaining-links R.

It will be noted that the center lines running through the centers of the pivots K^2 and pins f are below the centers of the pivots K'. There is therefore a moment with an arm equal to the distance between the center of the pivot K' and the center line of the connecting-link L and the weight of the bottom with the weight of the contents of the bucket, which keeps the handle M in place and the bottom G up against the opening in the bucket, as shown particularly in Fig. 1. To dump the bucket, the handle M is raised, when the parts will assume the position shown in Fig. 2, with the bottom bearing against the inclined portion of the back C. As the bottom G is suspended on its center line the counterweights I are added to the front ends of the bottoms to accelerate the dumping. The shelves A' form stops for the shorter arms of the operating-crank when the bucket is being dumped. Chains A^2, with hooks A^3, are fastened to the sides A of the bucket, the said hooks encircling around the handle M to lock it in place and prevent the said handle being raised when striking an obstruction and prematurely dumping the bucket.

Having described my invention, I claim—

1. In a dumping-bucket the combination of

a bottom therefor, pivots on the bottom, means on the bucket to support the said bottom on its pivots, means to move the pivots away from the bucket and thereby dump the said bottom, the latter means enabling the pivots to be placed in their original position and thereby move the bottom up against the bucket.

2. In a dumping-bucket the combination of a bottom therefor, pivots extending from the bottom, sustaining-links journaled on the bucket and supporting the said bottom with its pivots practically in equilibrium, means to move the sustaining-links and pivots and thereby dump the bottom.

3. In a dumping-bucket the combination of a bottom therefor, pivots extending from the bottom to maintain it practically in equilibrium when supported by said pivots, means on the bucket to support the pivots, means to dump the bottom, and means to raise the latter and maintain it against the bucket.

4. In a dumping-bucket the combination of sustaining-links journaled thereto, a bottom pivoted from said links and supported in equilibrium, bell-cranks journaled on the bucket, connections between the bell-cranks and the sustaining-links, a connection joining a pair of arms of the bell-cranks, and means to lock the said connection in place when the bottom is up against the bucket.

5. In a dumping-bucket the combination of sustaining-links journaled to the bucket, a bottom pivoted from said links to support it in equilibrium, operating bell-cranks journaled on the bucket, connections between the bell-cranks and the sustaining-links, a handle joining a pair of arms of the bell-crank, chains with hooks extending from the bucket and arranged to encircle the said handle.

6. In a bottom-dumping bucket the combination of sustaining-links journaled on the bucket, a bottom pivoted from said links, operating bell-cranks supported in bearings connected to the bucket, connecting-links joining the said bell-crank and the sustaining-links.

7. In a bottom-dumping bucket the combination of sustaining-links journaled on the bucket, a bottom pivoted from said links, operating bell-cranks journaled on the bucket, connecting-links joining arms of the bell-cranks and the sustaining-links, a handle joining a pair of the arms of the said bell-cranks, and arranged to bear against the body of the bucket, when the latter is closed by its bottom.

8. In a bottom-dumping bucket the combination of sustaining-links journaled on the bucket, a bottom pivoted from the said links, operating bell-cranks journaled to the bucket, connecting-links joining the sustaining-links and operating bell-cranks, the latter located so that the center lines of the connecting-links will be on one side of the axial lines of the bell-crank bearings, when the bucket is closed with its bottom, and on the opposite side thereof when the bucket is dumped.

9. In a bottom-dumping bucket sustaining-links journaled thereon so as to swing on the sides of the bucket, a bottom for the bucket, pivots extending from the said bottom at the central portion thereof, legs extending at right angles from the sustaining-links, bearings in the bucket, operating bell-cranks, pivots extending from the said bell-cranks supported in the said bearings, a connecting-link on each side of the bucket connecting the said leg and an arm of the operating bell-crank, and an operating-handle connecting the ends of the latter arms, and arranged to bear on the front of the bucket when it is closed with its bottom, a shelf extending from each side of the bucket in the path of the bell-cranks, to support the arms of the latter when the bottom of the bucket is dumped.

10. In a bottom-dumping bucket the combination of a cross-shaft journaled from the back of the bucket and at the upper end thereof, sustaining-links extending from the said shaft, bearings extending from the sides of the bucket near the front and upper portion thereof, operating bell-cranks supported in the latter bearings, a connecting-link joining on each side of the bucket the lower portion of the sustaining-link and one of the arms of the bell-crank, an operating-handle connecting the other arms of the operating bell-crank, and arranged to bear on the front of the bucket, and a bottom pivoted from the lower ends of the sustaining-links.

11. In a bottom-dumping bucket the combination of sustaining-links journaled on the bucket, a bottom pivoted at the central portion from the lower ends of the said links, operating bell-cranks journaled from the sides of the bucket, arms of unequal lengths on each bell-crank, a connecting-link extending between the lower end of each sustaining-link and the short arm of each bell-crank, an operating-handle connecting the longer arms of the bell-cranks, and a pocket in the front of the bucket located so as to be under the handle, when the bucket is closed with its bottom.

12. In the bottom-dumping bucket the combination of sustaining-links journaled thereto, a bottom pivoted from the links, counterweights secured to the bottom, operating bell-cranks supported in bearings connected to the sides of the bucket, connecting-links joining the said bell-cranks and the sustaining-links, and a bail secured to the bucket.

13. In a bottom-dumping bucket the combination of a front and rear for the body thereof, the lower portion of the back of the bucket tapering toward the central bottom-opening of the bucket, sustaining-links swinging on the sides of the bucket, operating bell-cranks operating on the sides of the bucket, connecting-links joining the lower ends of the sustaining-links and an arm on each bell-crank,

a bottom pivoted from the lower ends of the sustaining-links, arms of the bell-cranks arranged to bear against the front of the bucket when the bottom is closed, and the bottom arranged so that it will bear against the inclined back when dumped, and a bail for the bucket.

Signed at Long Island city, in the county of Queens and State of New York, this 21st day of February, A. D. 1905.

GUSTAVUS L. STUEBNER.

Witnesses:
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