

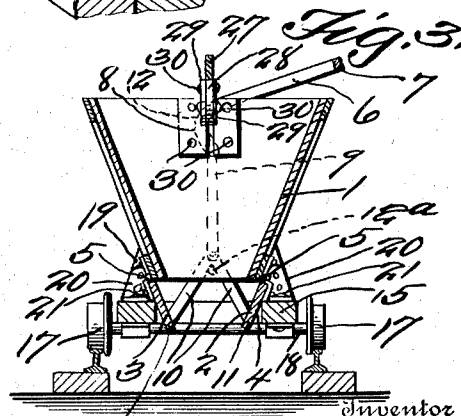
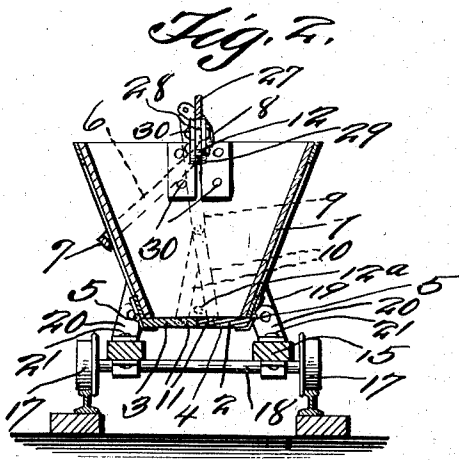
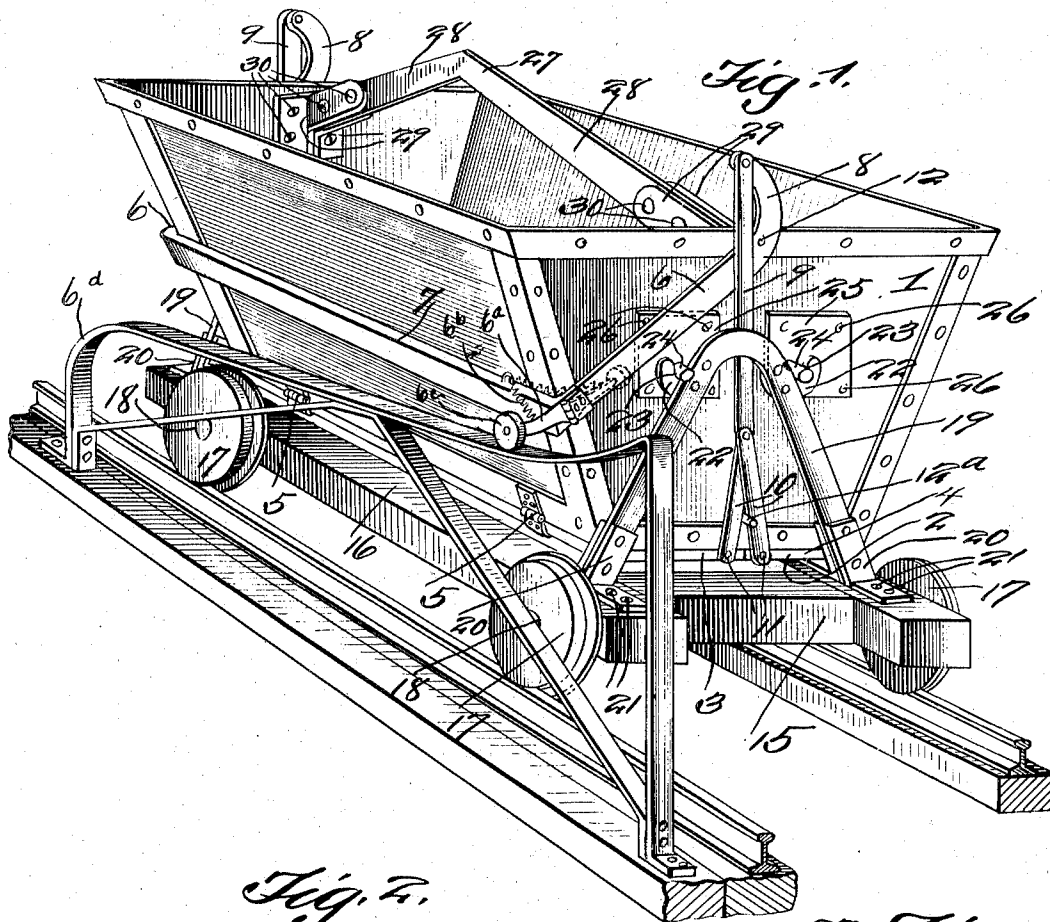
J. L. BLAKER.
DUMPING CAR.

APPLICATION FILED NOV. 6, 1909.

965,795.

Patented July 26, 1910.

2 SHEETS—SHEET 1.



Witnesses

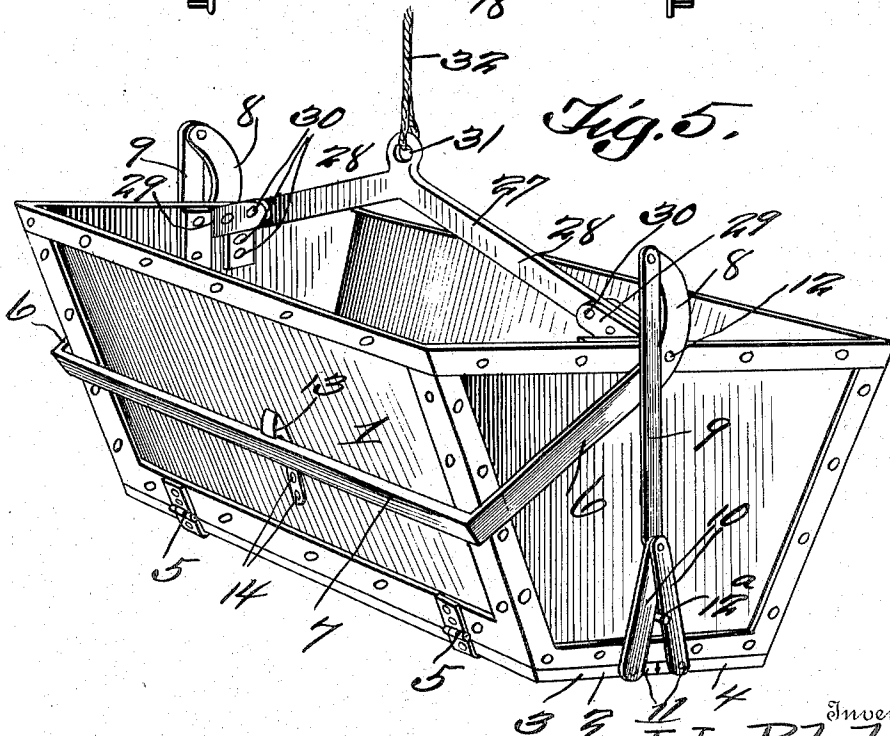
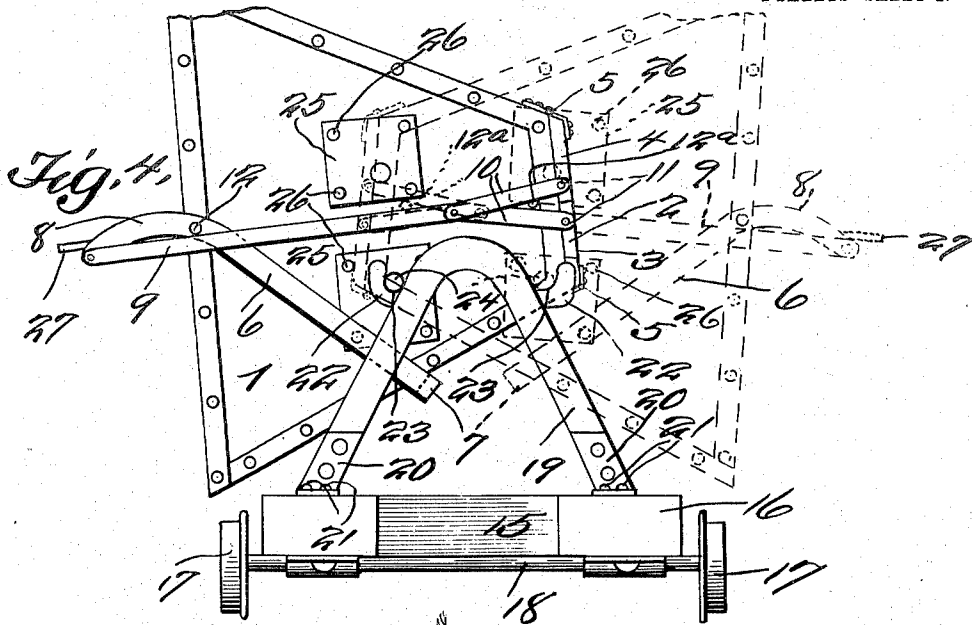
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2 SHEETS—SHEET 2.



Witnesses

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UNITED STATES PATENT OFFICE.

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DUMPING-CAR.

965,795.

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Application filed November 6, 1909. Serial No. 526,639.

To all whom it may concern:

Be it known that I, JAMES LEWIS BLAKER, a citizen of the United States, residing at Blaker Mills, in the county of Greenbrier and State of West Virginia, have invented a new and useful Dumping-Car; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention about to be set forth and claimed belongs to the art of dumping receptacles, particularly to combination dumping receptacles and cars, and the principal object of the invention is the provision of a car truck provided with a tilting body or receptacle, so mounted as to allow it to be removed, and whose bottom consists of two hinged parts, having novel means whereby these parts may be raised or lowered, and when raised or in a closed position, the same are securely locked, and when lowered, they are disposed at angles so as to guide the plastic material or concrete into forms.

The means for raising and lowering the parts of the receptacle's bottom comprise a U-shaped lever extending from end to end of the receptacle, and pivoted thereto and provided with curved ends, to which pitmen are connected which are connected with links of said parts, and when the said U-shaped lever is thrown in a horizontal position, thus closing said parts forming the bottom, the said pitmen are disposed upon a dead center, thereby securely holding the pieces forming the bottom of the receptacle in a closed position.

A further object of the invention is the provision of triangular frames at either end of the car track, between which the receptacle or car body is suspended, and in such a manner as to allow the receptacle or car body to be tilted to either side, whereby the contents of the receptacle may be dumped.

Another object of the invention is to so weight the U-shaped lever that the weight of the hinged parts of the bottom is overcome, so that the said parts may be returned to their closed positions after dumping the contents of the receptacle.

Another object is the provision of means for permitting the links between the pitmen and the parts of the bottom to separate approximately central of the receptacle or car

body. It is to be understood that after the U-shaped lever passes the dead center, the two parts forming the bottom of the receptacle are automatically opened, because of the weight of the contents thereon, which is in excess of the weight of the U-shaped lever.

Another object is the provision of a catch upon the side of the receptacle with which the U-shaped lever engages, to prevent the same from being accidentally raised.

A further object is to provide the receptacle or car body with means to which a suitable hoisting cable may be attached, in order to elevate the receptacle or car body from the car truck. The elevating of the car body or receptacle is employed when there is excavating being conducted, in which work suitable cranes, derricks or similar devices are employed, whereby the receptacle or car body may be lifted or elevated from the car truck and lowered into the excavation to be filled, and then returned to the truck.

In this specification and the annexed drawings, a particular design of device is adhered to, but the invention is not to be confined to this specific form. The device in its actual reduction to practice may necessitate changes and variations; the right thereto belongs to the applicant, provided such changes and variations are comprehended by the appended claims.

With the above objects in view, the invention consists of further combinations of parts and detailed structures, which will be hereinafter described, shown in the drawings and pointed out in the appended claims.

In the drawings:—Figure 1 is a perspective view of a car truck having the dumping receptacle mounted thereon and provided with the two-part hinged bottom. Fig. 2 is a transverse sectional view, showing the parts forming the bottom closed. Fig. 3 is a transverse sectional view through the receptacle and the car truck, showing the bottom open. Fig. 4 is an end elevation showing the receptacle tilted to one side in full lines and to the opposite side in dotted lines, in which case the bottom of the receptacle is closed, and Fig. 5 is a detail perspective view of the receptacle removed from the car truck, and having attached thereto a suitable hoisting cable, clearly showing that the

same may be utilized in connection with a suitable derrick or crane.

In regard to the annexed illustrations, 1 designates a car body or receptacle, having a bottom 2, formed of two parts 3 and 4, which are hinged at 5 and so arranged as to allow them to extend within a form, when opened, so as to guide concrete or other plastic material thereinto.

Pivoted at each end of the car body or receptacle are the end pieces 6 of the U-shaped lever 7, which end pieces are provided with curved portions 8. Pivoted to the extremities of these curved portions are pitmen 9, to the lower ends of which the links 10 are pivotally connected. The lower ends of the links, there being four in number, two at each end, are pivotally connected to the ends at 11 of the two parts forming the bottom, as shown in Figs. 1, 2 and 3 of the drawings.

When the U-shaped lever is thrown in the inclined position, as shown clearly in Figs. 1, 2 and 5, the pivotal connections of the pitmen to the curved portions and to the links are disposed slightly to one side of the pivot 12 of said end pieces 6, thus holding the parts of the bottom securely in their closed positions.

To open the parts forming the bottom, the U-shaped lever is raised, and when the pivotal connections of the pitmen to the curved portions and the said links pass the dead center, the weight of the material within the body or receptacle will cause the parts forming the bottom to readily open, in the positions as shown in Fig. 3.

To cause the links connecting the free portions of the hinged parts of the bottom and the lower extremities of the pitmen to separate approximately centrally of the car body or receptacle, lugs 12^a project laterally from the car body and between the said links. It will be clearly evident that as the parts of the bottom are lowered, the said links will be separated by these lugs.

When the U-shaped lever is in the position as shown in Figs. 1, 2 and 5, the same engages a catch or lug 13, secured to the side of the receptacle or car body, by means of screws or other suitable means 14.

In the drawings, a car truck 15 is shown, which comprises a rectangular frame 16 having rear and forward traction wheels 17 (which are mounted upon suitable axles 18 journaled in bearings of the frame). These wheels are designed to engage suitable rails, as shown in the drawings.

Mounted upon the frame 16 of the truck and at each end are triangular-shaped frames or supports 19. The lower extremities of the triangular frames or supports are secured to the frame 16 of the car truck by suitable angle plates 20 which embrace either side of the lower extremities of the said triangular frames or supports, and are

secured to the triangular frames or supports and the frame of the truck by screws or other suitable means 21.

Projecting from either side of the triangular-shaped frames or supports are bracket members 22, which form suitable bearings 23, in which the lugs 24 of the receptacle or car body are journaled. These lugs or projections of the receptacle or car body are integrally formed upon plates 25 which are secured to each end of the car body or receptacle by screws or other means 26. In this manner, the receptacle or car body is properly supported upon the car truck, whether in a horizontal or a tilted position. When it is desired to tilt the receptacle or car body, one side or the other of the receptacle is raised so as to oscillate the receptacle or car body upon two of the said lugs or projections, sufficient to allow the contents of the receptacle to be emptied.

Extending across the receptacle from end to end is a bail member 27, the parts 28 of which are angularly arranged with relation to one another. These parts 28 are securely connected and braced with relation to the ends of the car body or receptacle by means of the angular plates 29. These angular plates embrace opposite sides of the parts 28 and are secured to them and to the ends of the car body by means of screws, bolts or other fastening devices 30.

The central portion of the bail member, may or may not be provided with an eye 31, as seen clearly in Fig. 5, and to which eye any suitable hoisting cable or rope 32 may be connected, attention being directed to Fig. 5.

Pivotally connected to the end piece 6 of the U-shaped lever 7, is a pivoted arm 6^a, between which and the lever a spring 6^b is connected, which holds the arm 6^a in an operative or inoperative position, as hereinafter explained. The arm 6^a is provided with a roller 6^c which is adapted to engage an inclined projection 6^d which will raise the lever 7 upwardly beyond dead center, when the contents of the car or cars will be automatically dumped. When the arm 6^a is in an inoperative position, as shown in dotted lines in Fig. 1, the spring 6^b holds it in place, which spring extends about the corner of the car, as shown in dotted lines. But, however this spring always remains on the side of the pivot of the arm 6^a adjacent the corner of the car, the angles of the lever 7, the end piece 6 thereof and the corner of the car, being such that the spring will remain in this position. The lever may be extended, in order that the spring may escape the corner of the car, if it is so desired, for instance in practice.

Having thus fully set forth the invention, what is claimed as new and useful, is:—

1. In a dump car having a hinged two-

part bottom with means for operating the parts, in combination with means whereby the dump car may be tilted either to one side or the other.

5 2. In a dump car having a hinged two-part bottom with means for operating the parts, in combination with a car truck having uprights or supports at either end provided with supporting bearings, said dump car having lugs journaled in said bearings in such a manner as to allow the car body to be oscillated or tilted to one side or the other upon said lugs.

15 3. In a device as set forth, a car body or receptacle having a hinged two-part bottom and provided with means for operating the said parts, in combination with a car truck, supports at either end thereof for the car body or receptacle, and connections between the supports and the car body or receptacle, whereby the receptacle or body may be tilted to one side or the other.

20 4. In a device as set forth, a car body or receptacle having a hinged two-part bottom and provided with means for operating the parts, a car truck therefor provided with supports at either end thereof for the body or receptacle, said supports having bearings, said receptacle having lugs projecting from either end thereof journaled in said bearings in such wise as to permit the receptacle or car body to be tilted to either side.

30 5. In a device as set forth, a car body or receptacle, a bottom therefor comprising two hinged parts having links pivoted to their free swinging portions, pitmen connected to the links, a U-shaped lever pivoted to the pitmen, so as to raise and lower the hinged parts, in combination with a car truck having supports at either end, and connections between the supports and the car body or receptacle, whereby the car body or receptacle may be permitted to oscillate to either side.

45 6. In a device as set forth, a car body or receptacle, a bottom therefor comprising two hinged parts extending approximately the length of the body or receptacle, a U-shaped lever comprising side pieces pivoted at each end of the body, pitmen and links connected between the hinged parts and the side pieces, in combination with a car truck, supports at either end thereof, and connections between the supports and the car body or receptacle, whereby the body or receptacle may be permitted to oscillate to either side.

7. In a device as set forth, a car body or

receptacle, a bottom therefor comprising two hinged parts extending approximately the length of the body or receptacle, a U-shaped lever comprising side pieces pivoted at each end of the body, pitmen and links connected between the hinged parts and the side pieces, in combination with a car truck having supports at either end provided with bearings, said car body or receptacle having lugs projecting therefrom and journaled in said bearings, whereby the receptacle or body is permitted to oscillate to either side.

8. In a device as set forth, a car body or receptacle, a bottom therefor comprising two hinged parts, a U-shaped lever comprising side pieces pivoted to the ends of the body or receptacle, pitmen and links pivoted between the side pieces and the free swinging portions of the hinged parts and so disposed with relation to the hinged bottom and the side pieces of the lever as to hold the hinged parts in a closed position, in combination with a car truck, supports at either end thereof, and connections between the supports and the car body or receptacle whereby the car body or receptacle is permitted to oscillate to either side.

9. In a device as set forth, a car body or receptacle, a car truck having at each end triangular-shaped supports, angle plates secured to the car truck and embracing either face of the supports upon either side thereof, rivets or bolts for fastening the angle plates to said supports, said supports having upon either side detachable lugs forming bearings, said car body or receptacle having detachable plates provided with integral lugs to be received by said bearings in order to permit the car body or receptacle to be oscillated to either side.

10. In a device as set forth, a car body, a hinged bottom connected therewith, a U-shaped lever adapted to release said bottom, said U-shaped lever having a pivoted member provided with an anti-frictional member, and means connected between the pivoted member and the U-shaped member for holding the pivoted member in an operative or inoperative position.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES LEWIS BLAKER.

Witnesses:

IDA F. BLAKER,

MAMIE F. BLAKER.