C. STRELLNER & J. SIERK.

DUMP CAR.

APPLICATION FILED MAR. 18, 1913.

1,067,074.

Patented July 8, 1913.

2 SHEETS—SHEET 1.

Fig. 1.

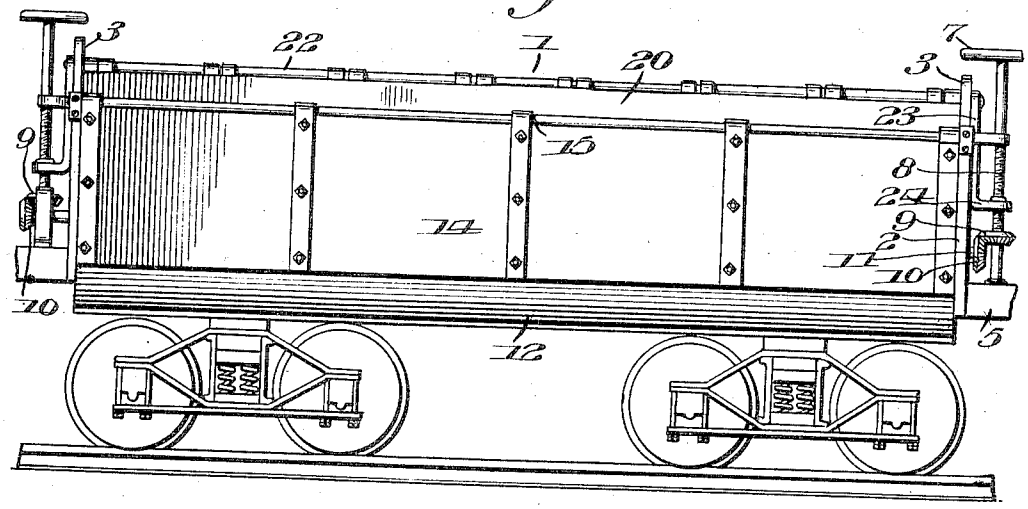
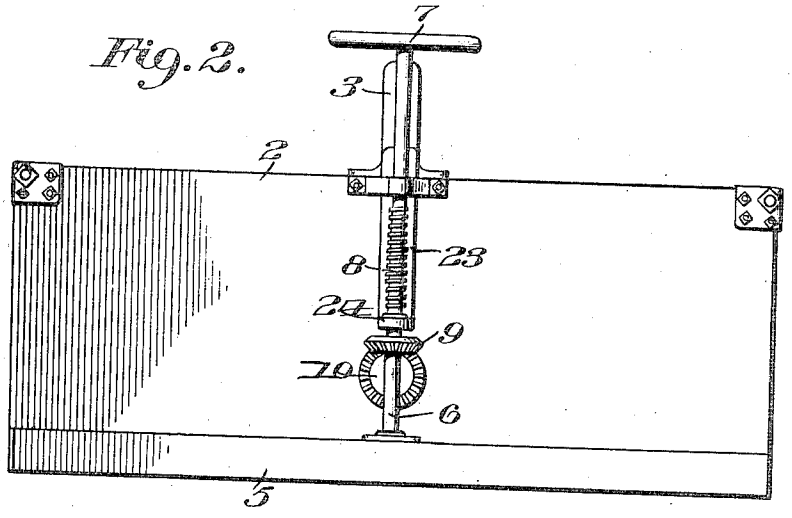


Fig. 2.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

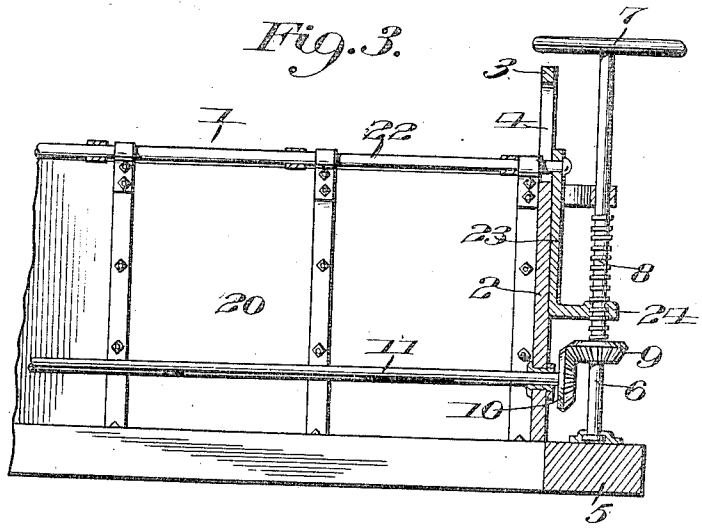
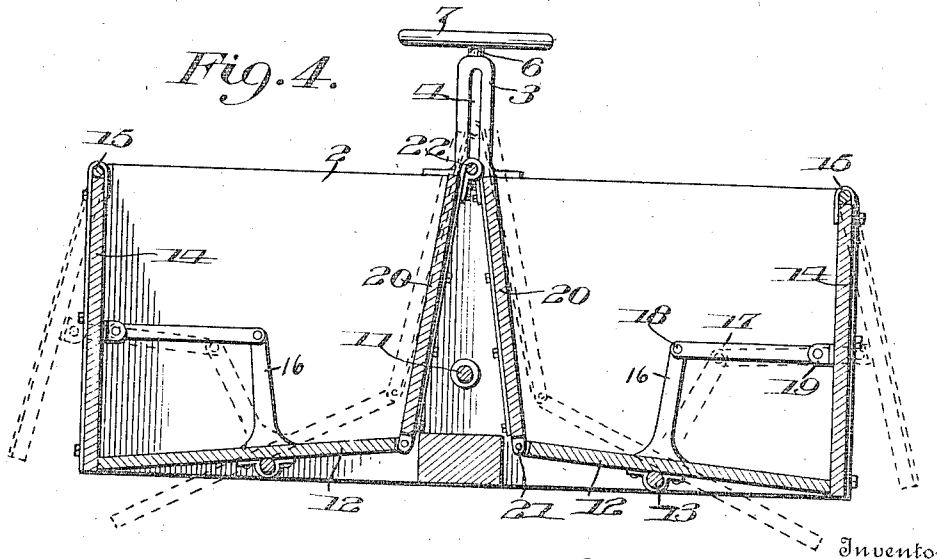


Fig. 4.



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CHARLES STRELLNER AND JOHN SIERK, OF DAVENPORT, IOWA.

DUMP-CAR.

1,067,074. Specification of Letters Patent. Patented July 8, 1913.

Application filed March 18, 1913. Serial No. 755,212.

To all whom it may concern:

Be it known that we, CHARLES STRELLNER and JOHN SIERK, citizens of the United States, residing at Davenport, in the county of Scott and State of Iowa, have invented new and useful Improvements in Dump-Cars, of which the following is a specification.

This invention is an improved dump car especially adapted for use as a railway dump car but also adapted for other uses and consists in the construction, combination and arrangement of devices hereinafter described and claimed.

The object of our invention is to provide an improved dump car which is adapted for dumping a load from opposite sides of the car simultaneously.

Another object is to effect improvements in the construction of the car whereby the same is provided with a pair of pivotally mounted bottom members, a pair of pivotally mounted outwardly opening side members, connected to and movable simultaneously with the bottom members, and inner wall members adapted to be raised and lowered and pivotally connected to the inner sides of the bottom members and for operating the latter and, hence, also the side members.

In the accompanying drawing:—Figure 1 is a side elevation of a dump car constructed in accordance with our invention. Fig. 2 is an end elevation of the same. Fig. 3 is a partial longitudinal vertical sectional view of our improved dump car. Fig. 4 is a vertical transverse sectional view of the same, showing the bottom, side and inner wall members in closed position in full lines and in open or dumping position in dotted lines.

Our improved car is here shown as a railway car but may be adapted for other uses.

The car body or frame 1 which may be of any suitable construction is provided with end walls 2 each of which has at its upper side a centrally arranged standard 3 provided with a vertical guide slot 4.

Cross beams 5 are at the ends of the car and in each of the said beams at the center thereof is swivelly mounted the lower end of a vertical shaft 6 which has a hand wheel 7 at its upper end and is provided with a threaded or screw portion 8. Each shaft 6 has a miter gear 9 the said miter gears engaging similar gears 10 on the ends of a longitudinally arranged shaft 11 which extends through the center of the car and is mounted in bearings in the end walls 2 thereof and, hence, when either one of the shafts 6 is turned the other is also turned in the same direction and at the same rate of speed for a purpose hereinafter stated.

The bottom of the car is formed by a pair of oppositely arranged bottom members 12 which are pivotally mounted as at 13 their pivots being spaced between their inner and outer sides and being nearer their inner sides than their outer sides. The side walls of the car are formed by side members 14 which are pivotally mounted at their upper sides as at 15 so that the said side members are arranged to swing and to open outwardly from the car.

Each bottom member 12 has an upwardly extending rock arm 16 and the said rock arms are connected by bars or links 17 to the side members 14, the said bars or links being pivotally connected to the rock arms as at 18 and to the side members as at 19. Hence, the bottom members and side members are connected together for simultaneous movement so that when a bottom member is inclined or arranged in dumping position, as shown in dotted lines in Fig. 4, the said side member connected thereto will be also inclined outwardly to form an opening between its lower side and the lower side of the bottom member through which the load on the bottom member may be dumped or discharged, as will be understood.

At the inner side of the bottom members are inner walls 20 which are inclined and converge upwardly, the lower sides of the said inner walls being pivotally connected to the inner sides of the bottom members as at 21 and the upper sides of the inner walls being pivotally connected to a longitudinally arranged bar 22 which extends from end to end of the car at the center thereof and operates in the slots 4 of the standards 3. On the ends of the said bar 22 are downwardly extending links 23 each of which has an outwardly extending horizontal arm 24 provided with a threaded opening through which the threaded portion of one of the shafts 6 extends.

By turning one of the shafts 6 the other is also caused to turn in the same direction and at the same rate of speed through the instrumentality of the gears 9—10, the shaft 11 as hereinbefore described and the said shafts by their threaded engagement with

the arms of the links 23 cause the latter to move upwardly or downwardly as the case may be so as to correspondingly move the bar 22 and, hence, also the inner walls 20. When the walls 20 are caused to move downwardly they serve to arrange the bottom members 12 in nearly horizontal or closed position, slightly tilted outwardly and to also arrange the side members 14 in closed position with their lower sides bearing on the upper outer sides of the bottom members.

When thus arranged, as shown in full lines in Fig. 4, the load in the car will be retained on the bottom members thereof and between the outer walls 14 and inner walls 20. When, however, the inner walls 20 are raised by the means and in the manner hereinbefore stated, the bottom members are inclined or tilted downwardly and outwardly and the outer or side members 14 are correspondingly tilted outwardly, thus causing an opening to be formed between the outer sides of the bottom members and the lower sides of the side members and the load to be discharged by gravity from and to opposite sides of the car.

The car may be thus discharged of its contents either when standing still or when moving slowly and if it be thus discharged of its contents when moving slowly, the load will be scattered and evenly distributed at opposite sides of the track, thus greatly facilitating grading operations.

While we have herein shown and described a preferred form of our invention, we would have it understood that changes may be made in the form, proportion and construction of the several parts without departing from the spirit of the invention and within the scope of the appended claims.

We claim:—

1. A dump car having a pivotally mounted bottom member provided with a rock arm, a side member pivotally mounted at its upper side, a connection between the rock arm of the bottom member and the said side member, and means to actuate the bottom member and hence simultaneously move the side member.

2. A car having fixed end walls, a pivotally mounted bottom member, the pivotal axis of which is intermediate the sides of said bottom member, a side member pivotally mounted between the said end walls and adapted to open outwardly from the car and to close inwardly and downwardly on the outer side of the bottom member, when the latter is in closed position, and a vertically movable wall pivotally connected to the bottom member at the side opposite the said side member.

3. A car having fixed end walls, a pivotally mounted bottom member, the pivotal axis of which is intermediate the sides of said bottom member, a side member pivotally mounted between the said end walls and adapted to open outwardly from the car and to close inwardly and downwardly on the outer side of the bottom member, when the latter is in closed position, a vertically movable wall pivotally connected to the bottom member at the side opposite the said side member, and means to raise and lower the said wall and thereby actuate the bottom member and the side member.

4. A car having a pair of pivotally mounted bottom members extending to opposite sides of the car, a pair of pivotally mounted outwardly opening side members, connections between the bottom members and side members to cause the former to operate the latter, inner walls pivotally connected at their lower sides to the inner sides of the bottom members, and means to raise and lower the inner walls and hence operate the bottom members and side members.

5. A car of the class described having fixed end walls provided with vertical medially arranged guides, a bar arranged to move vertically in said guides and extending longitudinally of the car, means to raise and lower said bar, bottom members at opposite sides of the car and pivotally mounted for angular movement in a vertical plane, the pivotal axes of the said bottom members being intermediate their inner and outer sides, inner wall members having their lower ends pivotally connected to the inner sides of the bottom members and their upper sides pivotally connected to the said vertically movable bar, outer side members pivotally connected at their upper sides to the said end walls of the car and arranged to open outwardly from and to close downwardly upon the outer sides of the bottom members, and connections between the bottom members and the outer side members to cause the latter to be operated by the former.

6. A car of the class described having fixed end walls provided with vertical medially arranged guides, a bar arranged to move vertically in said guides and extending longitudinally of the car, means to raise and lower said bar, bottom members at opposite sides of the car and pivotally mounted for angular movement in a vertical plane, the pivotal axes of the said bottom members being intermediate their inner and outer sides, inner wall members having their lower ends pivotally connected to the inner sides of the bottom members and their upper sides pivotally connected to the said vertically movable bar, outer side members pivotally connected at their upper sides to the said end walls of the car and arranged to open outwardly from and to close downwardly upon the outer sides of the bottom members, connections between the bottom

members and the outer side members to cause the latter to be operated by the former, links attached to the said bar and vertically arranged screw shafts swivelly connected to the car and having threaded engagement with said links.

7. A car of the class described having fixed end walls provided with vertical medially arranged guides, a bar arranged to move vertically in said guides and extending longitudinally of the car, means to raise and lower said bar, bottom members at opposite sides of the car and pivotally mounted for angular movement in a vertical plane, the pivotal axes of the said bottom members being intermediate their inner and outer sides, inner wall members having their lower ends pivotally connected to the inner sides of the bottom members and their upper sides pivotally connected to the said vertically movable bar, outer side members pivotally connected at their upper sides to the said end walls of the car and arranged to open outwardly from and to close downwardly upon the outer sides of the bottom members, connections between the bottom members and the outer side members to cause the latter to be operated by the former, links attached to the said bar and vertical screw shafts swivelly connected to the car and having threaded engagement with said links, a longitudinally arranged shaft, and gears connecting the said longitudinally arranged shaft to said screw shafts to cause the latter to operate simultaneously when either one of them is turned.

In testimony whereof we affix our signatures in presence of two witnesses.

CHARLES STRELLNER.
JOHN SIERK.

Witnesses:
CHAS. A. WIESE,
A. J. GOETLIG.