No. 676,478. Patented June 18, 1901.

F. STARKEY.

DUMP CAR.

(Application filed Mar. 22, 1901.)

(No Model.)

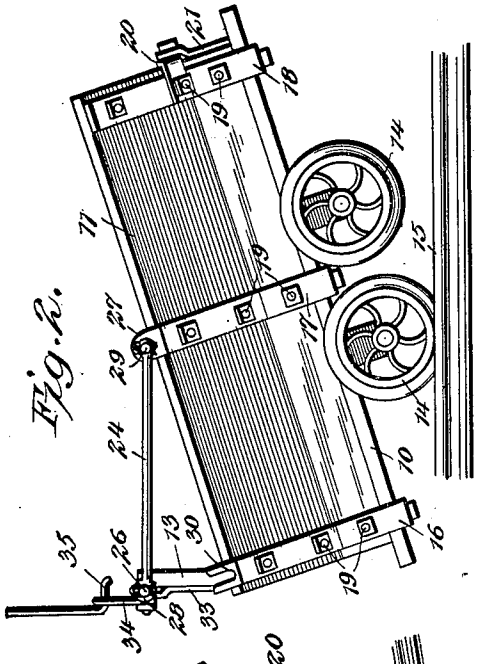


Fig. 2.



Fig. 4.

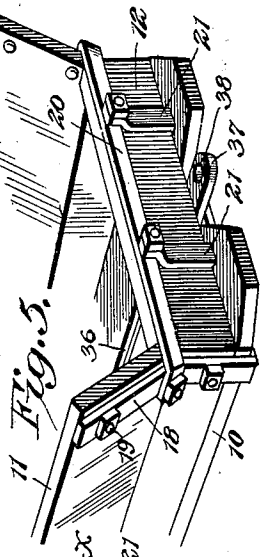


Fig. 5.

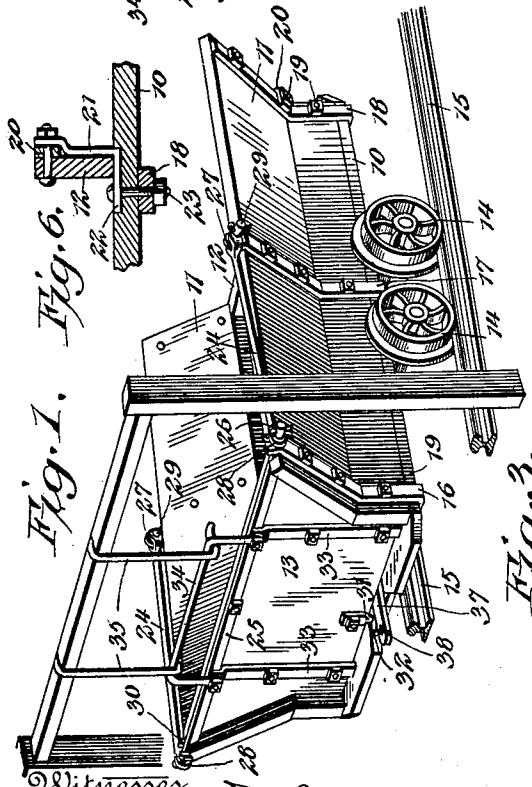


Fig. 1.

Fig. 6.

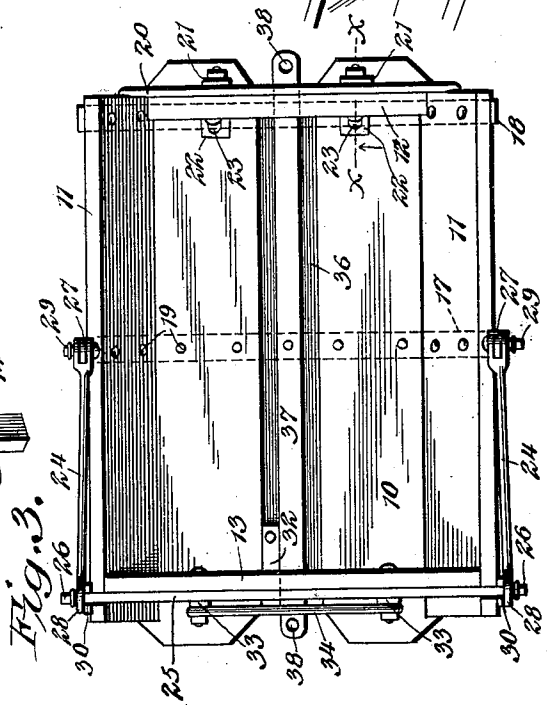


Fig. 3.

Witnesses
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UNITED STATES PATENT OFFICE.

FRANK STARKEY, OF IRONDALE, OHIO, ASSIGNOR OF ONE-HALF TO JOHN W. BRANT, OF SAME PLACE.

DUMP-CAR.

SPECIFICATION forming part of Letters Patent No. 676,478, dated June 18, 1901.

Application filed March 22, 1901. Serial No. 52,357. (No model.)

To all whom it may concern:

Be it known that I, FRANK STARKEY, a citizen of the United States, residing at Irondale, in the county of Jefferson and State of Ohio, have invented a new and useful Dump-Car, of which the following is a specification.

The present invention relates to improvements in cars, and more particularly to the class of dumping-cars in which the body is tilted for the purpose of discharging the contents.

One of the principal objects of the invention is to provide an improved form of end-gate which when in closed position is held rigidly against movement and is adapted to be disengaged from the body and suspended when the car is tilted, so that the contents may readily discharge.

A further object is to improve the construction of the car-body so that it will be stable and rigidly braced to withstand the strains and rough usage to which it is subjected.

In the following specification the preferred form of construction and the operation thereof is fully described, and this construction is also shown in the accompanying drawings, wherein—

Figure 1 is a perspective view of the improved car. Fig. 2 is a side elevation of the same when tilted. Fig. 3 is a top plan view. Fig. 4 is a vertical cross-section. Fig. 5 is a detail perspective view of the rear end of the car, and Fig. 6 is a detail section taken on the line x x of Fig. 3.

Similar reference-numerals indicate corresponding parts in the several figures of the drawings.

The car-body, as shown, is of the usual form and comprises a bottom 10, flaring sides 11, a fixed rear end 12, and a removable end-gate 13. This body is suitably supported on wheels 14, which are arranged to run on tracks, as 15. The bottom and sides are rigidly braced by means of metallic bars 16, 17, and 18, which extend transversely across the outer face of the sides and under the bottom, being secured in place by suitable bolts 19. The braces 16 and 18 are located, respectively, at the opposite ends of the body, and the remaining one, 17, is situated at an intermediate point. In order to hold the rear end-board 12 in place, a tie-brace 20 is secured along its upper edge and has its ends bent about and overlapping the brace 18, to which it is bolted. By this arrangement the brace 20 serves the double purpose of holding the end-board 12 in place and preventing the spreading of the sides. Vertical angle-brackets 21 are secured at their upper ends to the tie-brace 20 and have their lower arms 22 seated in the bottom 10. Bolts 23, passing through the bottom, connect the brace 18 and said arms 22. It will therefore be seen that this end is incased in a metallic frame, which greatly strengthens the body. The opposite end of the car is provided with the removable end-gate 13, which is hinged to the car by means of the links 24, that are secured in the following manner: A brace-rod 25 extends along the upper edge of the gate 13 and has its ends projecting beyond the edges thereof and rounded to form the pintles 26. The intermediate brace-bar 17 has its ends extended above the upper edges of the body and perforated to form the hinge-ears 27. The links 24 are each provided at one end with an eye 28, which receives one of the pintles 26. The opposite ends of the links are bifurcated to straddle the ears 27 and are provided with perforations that aline with the perforations of said ears and receive the pivot-pins 29. By this means the end-gate is pivoted at its upper edge to the links, and the links are pivoted to the car-body. The ends of the brace-bar 16 also project above the upper edges of the body and have notches 30, which receive the projecting ends of the bar 25, so that not only are the hinge-eyes and the links relieved from the outward pressure of the contents of the body, but the sides are braced against outward strain by the interlocking of the ends of the bar 25 and the brace 16. A depending pin 31, secured to the lower edge of the end-gate, is arranged to engage in an eye 32, secured to the bottom 10, and thus holds the lower edge against displacement. Suitable strengthening-straps 33 may be secured transversely across the end-gate.

This car, as shown, is designed to be tilted in order to discharge its contents, and means are provided for removing and holding the end-gate in inoperative position. For this

purpose a bail 34 is secured to and projects above the upper edge of the gate, and suitably-supported depending hooks 35 are placed above the track at the point at which the car is to be dumped and are arranged to engage the bail, as clearly shown in Fig. 1. Upon raising the rear end of the car the forward end will be consequently lowered, while the gate will maintain a fixed position with relation to the tracks, and will therefore be displaced from the end of the body. The contents will thus have a free discharge passageway beneath the suspended end-gate, and should any portion come in contact with the lower edge thereof because of the pivotal connection said end-gate will be free to swing, and thus prevent any stoppage or choking. Upon returning the body to its normal position the end-gate will drop back to its locked position.

The bottom 10 of the car is preferably flat and has an intermediate longitudinal depressed portion 36, formed by making the central board thinner than the outer boards. The draw-bar 37 is secured longitudinally within this depressed portion and has its ends projecting beyond the ends of the body and provided with the usual openings 38, in which the coupling devices are secured.

By the above construction it will be seen that a dumping-car is provided which is strong and durable and that has its sides, bottom, and ends rigidly braced. Furthermore, the end-gate is removable and when in operative position is not only securely locked, but also serves as a brace to hold the sides against spreading.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described dump-car will be readily apparent to those skilled in the art without further description, and it will be understood that various changes in the form, proportion, and minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. In a dump-car, the combination with the body, of a removable gate movably secured to the body, said gate when in position having a detachable interlocking engagement with the opposing walls of the body to hold said walls against outward movement, said gate disengaging the opposing walls of the body when opened.

2. In a dump-car, the combination with the body, of a removable gate, links pivotally attached to the body and pivotally connected to the gate, and a separable interlocking connection between the gate and the body contiguous to the connection between the gate and the links.

3. In a dump-car, the combination with the body, of a removable gate, links pivotally attached to the body and also pivotally connected to the gate, and separable connections between the gate and the body, one connection being located at the upper portion and the other at the lower portion of said gate.

4. In a dump-car, the combination with the body having side walls, of braces extending transversely across said walls, and a removable end-gate pivotally connected to the body, links secured to the gate and pivotally connected to the body, said body being provided with projecting portions which have a detachable interlocking engagement with the braces when the end-gate is in operative position.

5. In a dump-car, the combination with the body having a bottom and side walls, of a brace extending transversely across the bottom and side walls and having notched ends which project above said side walls, a removable end-gate, links secured to the gate and having a pivotal connection with the car-body, said gate being provided with a longitudinally-disposed brace, the ends of which project beyond the ends of the gate and detachably engage in the notches of the body-brace when said gate is in operative position.

6. In a dump-car, the combination with the body having a bottom and side walls, of braces extending transversely across the bottom and side walls and having ends which project above said side walls, the projecting ends of one brace being notched, and those of the other having hinge-eyes, a removable end-gate arranged to close one end of the body and provided with a longitudinally-disposed brace having projecting ends which engage in the notches of said body-brace, and links pivotally connected to the eyes of the other body-brace at one end and having a pivotal engagement at their other ends with the projecting ends of the gate-brace.

7. In a car, the combination with the body having sides, bottom and end, of a body-brace surrounding said sides and bottom contiguous to the end, and a tie-brace extending longitudinally of said end and having its ends secured to the body-brace at the sides thereof.

8. In a car, the combination with the body having sides, bottom and end, of a body-brace surrounding said sides and bottom contiguous to the end, a tie-brace extending longitudinally of said end and having its ends secured to the brace at the sides thereof, transverse braces secured to said longitudinal end brace and having their lower ends offset and located adjacent to the car-bottom, and means connecting the body-brace and said offset ends of the transverse braces.

9. In a dump-car, the combination with the body having a bottom and side walls, of braces extending transversely across the bottom and side walls and having ends which project above said side walls, the projecting ends of one brace being notched, and those of the other having hinged eyes, a removable end-gate arranged to close one end of the body

and provided at its upper edge with a longitudinally-disposed brace having projecting ends which engage in the notches of said body-brace, links pivotally connected to the eyes of the other body-brace at one end and having pivotal engagement at their other ends with the projecting ends of the gate-brace, and a depending pin located at the lower edge of the end-gate and engaging an eye in the bottom of the body when the gate is in operative position.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

FRANK STARKEY.

Witnesses:

JAMES E. PAISLEY,

DANIEL MCINTOSH.