(No Model.)

J. W. ALFRED.

DUMPING CAR.

No. 421,645. Patented Feb. 18, 1890.

Fig-1-

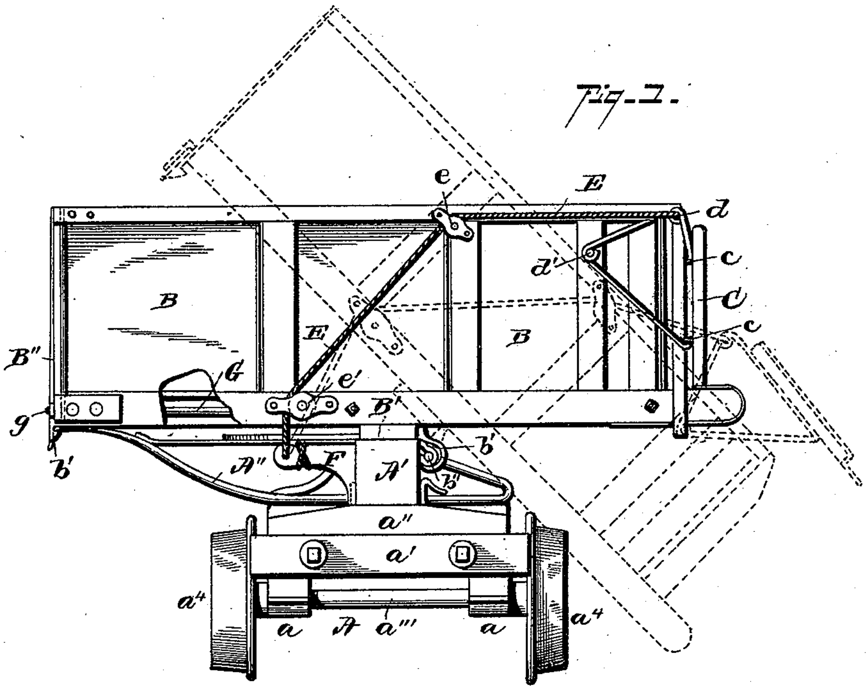


Fig-2-

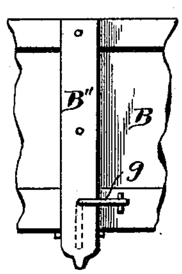


Fig-5-

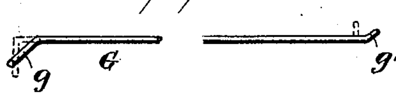


Fig-4-

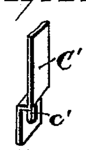
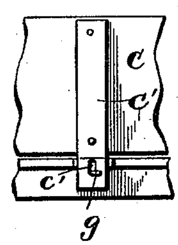


Fig-3-



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UNITED STATES PATENT OFFICE.

JAMES W. ALFRED, OF LEWISTOWN, PENNSYLVANIA.

DUMPING-CAR.

SPECIFICATION forming part of Letters Patent No. 421,645, dated February 18, 1890.

Application filed January 15, 1890. Serial No. 337,004. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. ALFRED, a citizen of the United States, residing at Lewistown, in the county of Mifflin and State of Pennsylvania, have invented certain new and useful Improvements in Dumping-Cars; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in dumping-cars of that class which are commonly employed in railroad excavating and grading.

The invention has for its special object to improve upon the construction of the dumping-car described in my patent of May 21, 1889, No. 403,571; and it has for its further object to generally improve upon the construction and at the same time render more efficient in operation this class of dumping-cars.

To the above ends and to such others as the invention may pertain the same consists in the peculiar construction and in the novel combination, arrangement, and adaptation of parts, all as more fully hereinafter described, shown in the accompanying drawings, and then specifically defined in the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, like letters of reference indicating like parts throughout the several views, and in which drawings—

Figure 1 is an end view of a dumping-car having my improvements attached, the dotted lines showing the body of the car or box tilted or dumped and the tail-board raised. Fig. 2 shows a portion of the front of the car opposite the tail-board and exhibits the handle end of the locking-rod. Fig. 3 shows a portion of the tail-board with the locking end of the locking-rod. Fig. 4 is a perspective view of the lower part of the bar or strap upon the tail-board, and Fig. 5 is a perspective view of the locking-rod.

Reference now being had to the details of the drawings by letter, A is the truck, consisting of the frame-work a a' a'', carried upon the axles a''' and the wheels a^4 and supporting pivotally the central beam A′, to which the box or body of the car is hinged, said central beam being held locked by the device a^5 and having attached to it the iron side frame A″, a portion of which extends to the front of the box to engage the latch.

B is the box or body of the car, framed upon a central beam B′, which is disposed upon the top of the beam A′ and hinged to the side thereof by hinge-straps b and the rod b''.

B″ is a strap secured to the center of the front of the box, and terminates at its lower end in a downwardly-projecting spring-catch b', adapted to engage the end of the bar A″ and retain the box in its normal position.

C is the tail-board or end-gate, the ends of which board project slightly beyond the sides of the box, against the ends of which it fits. To each of said projecting ends is secured, by staples c or otherwise, the vertical arm of the triangular frame or plate D, which has at its upper corner an eye d and projecting along the side of the box has the angle or apex d', pivoted to said side, said pivotal support d' being below the eye d. A cord E, or its equivalent, is secured to the eye d and passes along the side of the box over the pulley e, near the top of the side, and upon a higher plane than that of the pivotal point d', and over another pulley e', near the bottom, and thence is secured to the end of the bracket F, which is secured to the side of the central beam A′.

When the box is tilted or dumped, the ends of the cords E are held by the brackets F, and as the box recedes from its support on that side of the beam on which the brackets are placed the triangular frame D is turned on its pivot, as indicated in dotted lines in Fig. 1, and the tail-board is raised. Upon replacing the box in its normal position the tail-board drops into position again by its own weight.

In order to prevent the giving way of the tail-board accidentally and to relieve it of strain, the following locking mechanism is employed: A rod G (shown in detail in Fig. 5) is passed through the strap B″, through the frame and under the bottom of the box B,

and through the slot c' in the strap C', which is secured to the center of the tail-board. The tail end of said rod, near the face of the strap C', is given a short turn g', adapted to engage and hold the strap C', and the front end is also bent to form the crank-handle g. Figs. 2, 3, and 5 show the rod in the position which it assumes when holding the tail-board locked, the handle g being turned sidewise and held in that position by a notched bracket g'', which is secured to the front of the box, the dotted lines in said figures showing the position in which it is when unlocked and when the tail-crank g' is ready to pass in or out of the slot.

From the foregoing description it will be seen that after unlocking the tail-board by turning the handle or crank g downward, unlatching the box by disengaging the latch b from the bar A'', the box may be at once tilted or dumped, the tilting action of said box raising the tail-board C automatically and allowing it to swing again into position upon the box being righted.

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

1. In a dumping-car, the combination of the beam, the tail-board C, triangular frames D, having their base secured to said tail-board and their apex pivoted to the sides, cords E, having one end secured to the upper corner of said frames and the other to brackets projecting from the side of the beam A' and passing over pulleys on the side of the box, pulleys e, secured to the sides, and brackets F, secured to said beam and holding one end of said cords, substantially as described, and for the purpose specified.

2. In a dumping-car, the combination of the box B, having the strip B'', a tail-board C, having a strip C', provided with a slot c', the rod G, passing through the lower end of the strap B'' and the slot c' of the strap C', and having cranked or bent ends g g' and notched bracket g'', substantially as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES W. ALFRED.

Witnesses:
B. A. LEUCKS,
FRANKLIN H. HOUGH.