G. C. WORTMAN.

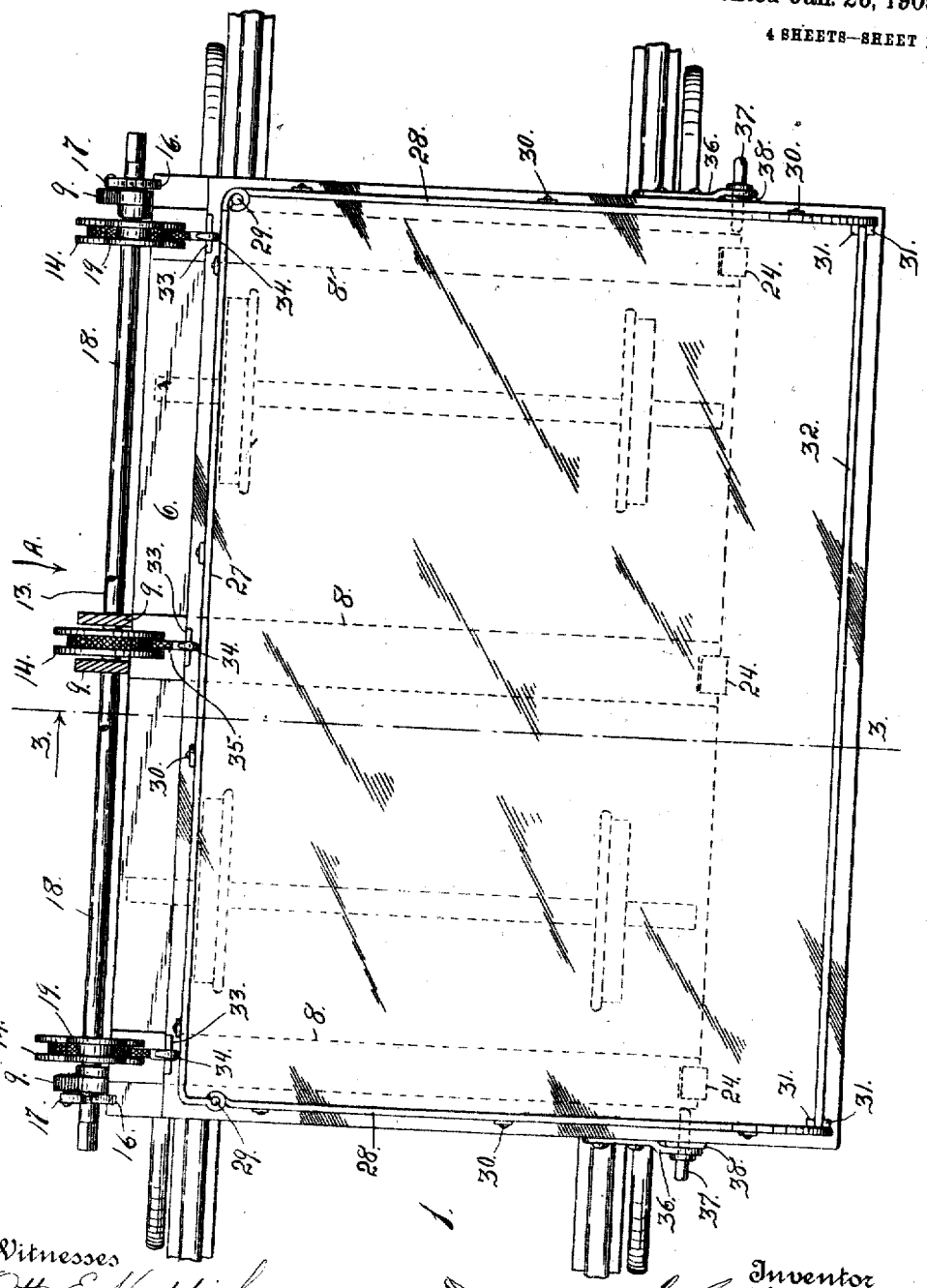
DUMPING AND LOADING CAR.

APPLICATION FILED OCT. 1, 1906.

910,626.

Patented Jan. 26, 1909.

4 SHEETS—SHEET 1.



Witnesses

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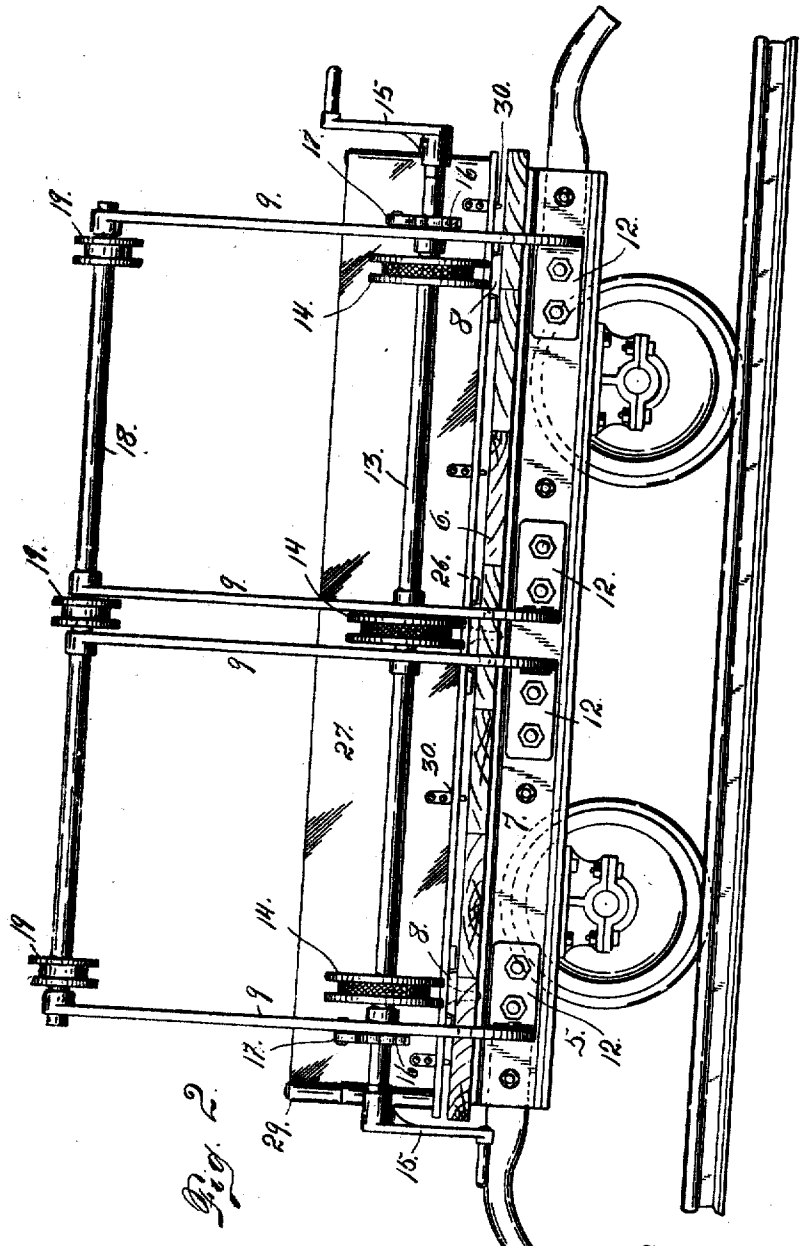


Fig. 2.

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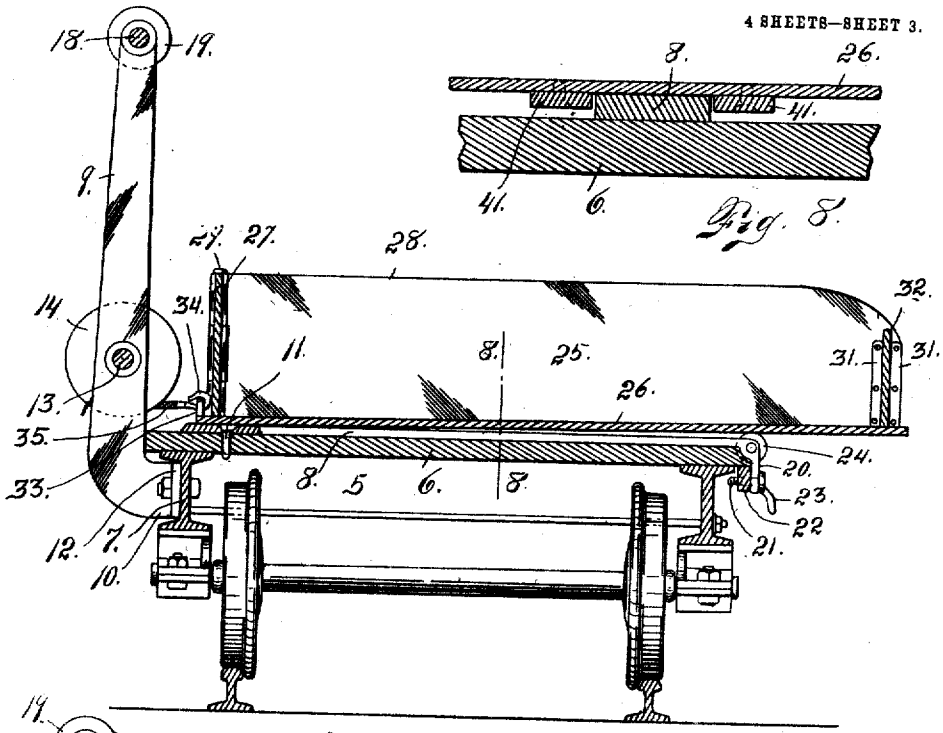


Fig. 3.

Fig. 8.

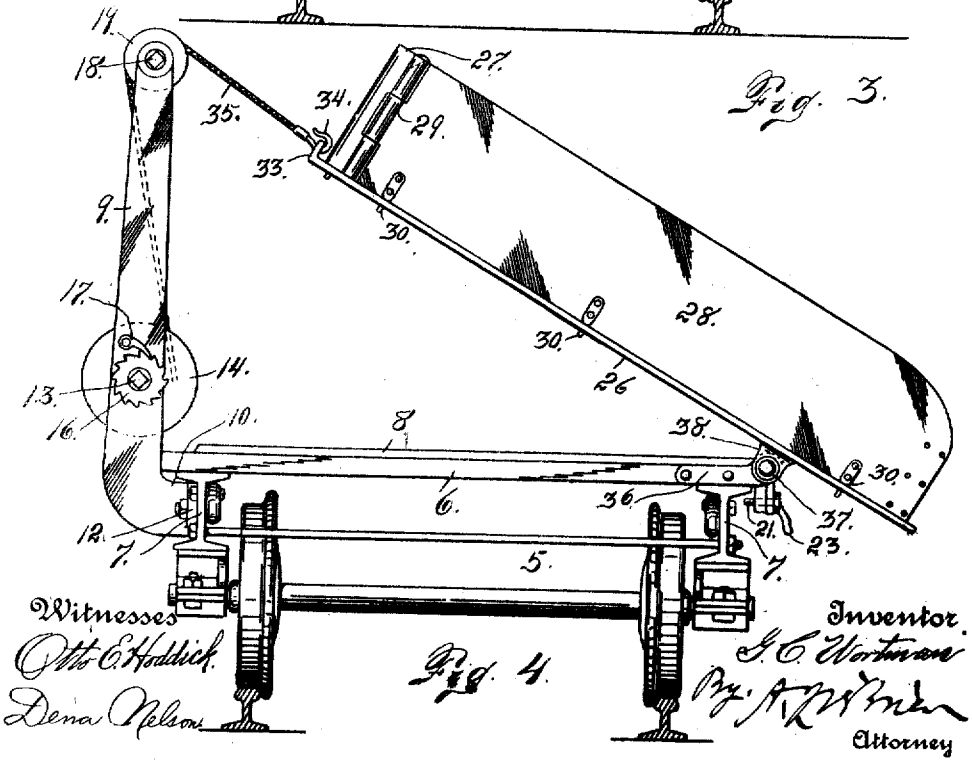


Fig. 4.

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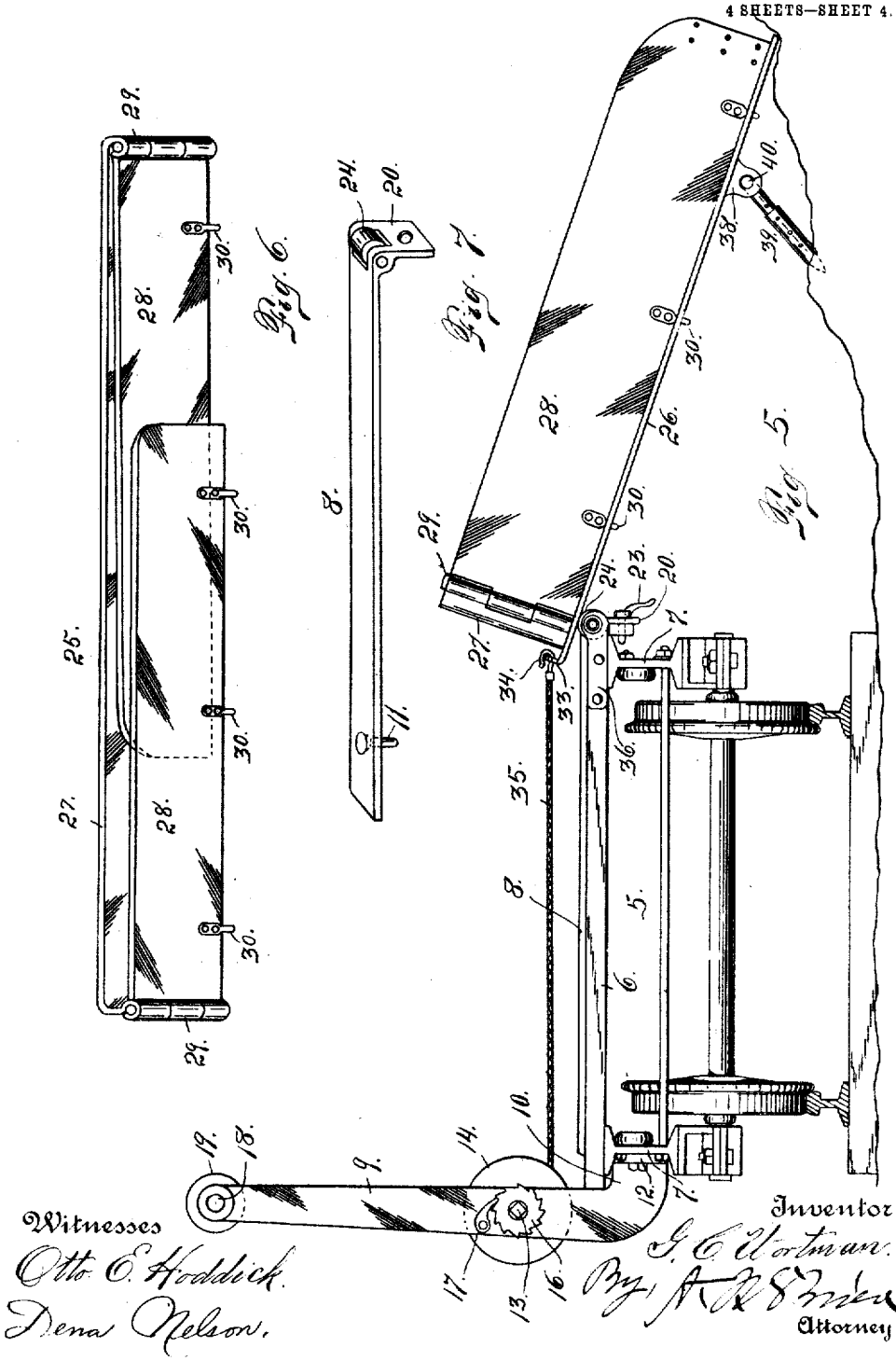
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4 SHEETS—SHEET 4.



Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE C. WORTMAN, OF WORTMAN, COLORADO

DUMPING AND LOADING CAR.

No. 910,626. Specification of Letters Patent. Patented Jan. 26, 1909.

Application filed October 1, 1906. Serial No. 336,807.

To all whom it may concern:

Be it known that I, GEORGE C. WORTMAN, a citizen of the United States, residing at Wortman, in the county of Lake and State of Colorado, have invented certain new and useful Improvements in Dumping and Loading 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 and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in dumping and loading cars, the invention being more especially applicable to flat cars of the class known as push cars employed in construction work and adapted to be pushed along on the track by the workmen. The invention may, however, be used in connection with cars of larger size and the invention is therefore not limited to push cars.

The invention will now be described in detail reference being made to the accompanying drawing in which,

Figure 1 is a top plan view of a push car equipped with my improved construction the dumping and loading body being shown in place on the truck. Fig. 2 is a side elevation of the same viewed in the direction of arrow A in Fig. 1. Fig. 3 is a cross section taken on the line 3—3 Fig. 1. Fig. 4 is an end elevation showing the movable body in the dumping position. Fig. 5 is an end view showing the movable body in the loading position. Fig. 6 is a perspective view in detail showing the movable body detached from the car and in the collapsed position. Fig. 7 is a perspective view of one of the plates attached to the platform of the car to facilitate loading and unloading. Fig. 8 is a vertical section taken on the line 8—8 Fig. 3.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate an ordinary push car provided with a platform 6 mounted on eyebeams 7, the latter being secured to the axle bearings in any suitable manner.

Securely bolted to the I-beams on one side of the car is a windlass structure which as shown in the drawing is composed of a number of upright bars 9. As shown in the drawing there are four of these bars, two of which may be termed end bars while two others are centrally located and in close proximity to each other. The lower extremities of these bars 9 are turned inwardly as shown at 10 and provided with flanges 12 which are securely bolted to one of the I-beams 7. Upon these standards 9 is journaled an operating shaft 13 provided with double flanged wheels 14 which are made fast on the said shaft, whereby they rotate therewith, there being three of the said wheels upon the said shaft, one wheel being centrally located between the two central standards 9 while one of the other wheels is located near each extremity of the shaft. As shown in the drawing this shaft 13 is provided with hand cranks 15 to facilitate manipulation. It is understood, however, that any other power may be connected with this shaft for the purpose of operating the same. In the case of small cars such as illustrated in the drawing hand power alone will be sufficient for the purpose. In larger cars, however, it is evident that other power may be required. Upon the said shaft 13 are also mounted two ratchet wheels 16, one being located near each extremity of the shaft. A pawl 17 is mounted on the standard adjacent each ratchet wheel, the said pawls being arranged to engage the wheels and lock the shaft in any desired position of adjustment. The shaft 13 is located near the lower extremities of the standards 9 and just above the platform 6. Journaled in the top of the standards is another shaft 18 also provided with double flanged wheels 19 fast on the shaft and positioned to correspond to the positions of the wheels 14 on the shaft 13. That is to say the wheels 19 are located directly above the wheels 14.

Extending transversely across the platform 6, is a number of flat bars 8, three being shown in the drawing and indicated by dotted lines in Fig. 1. These bars are connected with the platform at one extremity by means of pins 11 dropped through registering openings formed in the bar and in the platform for the purpose. The bars 8 are provided at one extremity with a depending part 20 extending at right angles to the body of the bar and provided with an opening to receive a bolt 21 which is threaded in a part 22 connected with the platform. This bolt is provided with a head having a sort of crank arm 23 to facilitate manipulation. In the extremity of the bar provided with the part 20, is journaled an anti-frictional roller 24 which projects slightly above the bar in order to

form a bearing for the bottom of the movable box or body 25 of the structure. This box or body as shown in the drawing is composed of a bottom 26, a side member 27 and two end members 28 hinged to the extremities of the side member as shown at 29.

The side and end members of the body are connected with the bottom by means of pins 30, which enter suitable openings formed in the bottom therefor, thus making the parts 27 and 28 readily removable whereby they may be folded into small compass (see Fig. 6). It is evident that the bottom of the movable device may be employed without the upright parts forming the box. These upright members are attached to increase the holding capacity of the device. The outer extremities of the end members 28 or their extremities farther to the right referring to Fig. 3 of the drawing are provided with vertically disposed separated strips 31 forming ways to receive a removable side member 32. The inner extremity of the bottom 26 is provided with upwardly-projecting outer lugs 33 adapted to receive hooks 34 connected with the extremities of cables 35 adapted to pass around the wheels 13 and 19 for the purpose of handling the movable structure. The extremities of the car platform 6 are provided with metal members 36 provided with openings in their outer extremities to receive pins 37 which also pass through openings in lugs 38 with which the extremities of the body bottom 26 are provided. The pins 37 are removable to permit the movable body to slide to the loading position shown in Fig. 5. When in the position shown in the last named figure, supporting legs 39 provided with hook-shaped extremities 40 are connected with the lugs 38 to facilitate the handling of the movable body. These legs 39 are preferably adjustable being composed of two telescoping parts, whereby their length may be regulated at will. The bottom 26 of the receptacle 25 is provided with separated strips 41 which occupy positions on opposite sides of the bars 8 when the said body is in place upon the platform (see Fig. 8).

Assuming that the car is loaded, that is to say that the movable body whether consisting of the bottom 26 alone or the entire structure composed of the bottom and the side and end members, is in the position shown in Fig. 3, and it is desired to dump the same, the cables will be attached to the wheels 14 of the shaft 13, and then carried upwardly over the wheels 19 of the shaft 18 (see Fig. 4), after which the hooks 34 will be connected with the apertured lugs 33 of the movable body. Then as the shaft 13 is rotated, the said body will be lifted to the position shown in Fig. 4 or to a sufficient inclination to permit dumping. In this case it is of course assumed that the pin 37 is in place whereby the outer part of the movable body is hinged to the outer edge of the car. After the dumping is completed, the said body is lowered to the position shown in Fig. 3. Now if it is desired to load the car, the pins 37 are removed, the cables disengaged from the wheels 19 and directly connected with the said body as shown in Fig. 3. Then as the cables are released, the body may be moved outwardly upon the platform by the aid of the anti-frictional rollers 24, until it overbalances and slides downwardly to the position shown in Fig. 5. This position greatly facilitates the loading of the car, after which the shaft 13 is turned in the opposite direction, and the loaded body drawn upwardly upon the platform in a manner readily understood.

If desired when the body 25 is in the position shown in Fig. 5, the cable 35 may be detached, and a grappling hook (not shown) connected with the cable which may be employed for hauling large boulders from the body of the device, which boulders are too heavy to be handled by men directly without breaking them by blasting or otherwise.

Having thus described my invention, what I claim is:

1. A loading and dumping attachment for cars comprising in combination with the car, a windlass structure mounted thereon, a transversely tiltable body, flexible means for connecting the tiltable body with the windlass, and means for hinging the said body to the car including a removable hinge member whereby the said body may be readily detached, the axis of the hinge being parallel with the length of the car.

2. The combination with a car, of a windlass structure mounted thereon and provided with upper and lower sets of wheels, cables connected with one set of wheels and adapted to pass over the other set of wheels, and a dumping member having one side connected with the cable, its opposite side being hinged to the car to permit dumping when the side connected with the cable is raised. the axis of the hinge being parallel with the length of the car, whereby the dumping member discharges in a direction at right angles to the length of the car, the dumping member also being detachable at its hinging connection to permit lateral movement for the purpose set forth.

3. The combination with a car, of a windlass mounted thereon, a body mounted on the car and movable transversely to the length of the car, and a cable connection between the windlass and the said movable body whereby the latter may be manipulated, substantially as described.

4. The combination with a car, of a body hinged to dump in a direction transversely to the length of the car, and detachable at its hinging connection to permit lateral movement for dumping or loading purposes.

5. The combination with a car, of a body hinged to dump in a direction transverse to the length of the car, and detachable at its hinging connection to permit lateral movement for dumping or loading purposes, and hoisting means for imparting to the car both the hinging and lateral movement.

6. The combination with a car, of a platform hinged for dumping purposes and detachable at its hinging connection to allow it to travel in a direction transversely to its hinging axis.

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

GEORGE C. WORTMAN.

Witnesses:

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A. J. O'BRIEN.