M. ORENSTEIN.

DUMPING CAR.

APPLICATION FILED MAY 18, 1908.

905,569. Patented Dec. 1, 1908.

Fig. 1

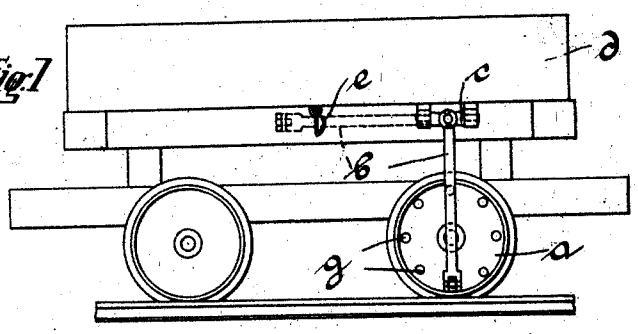


Fig. 2.

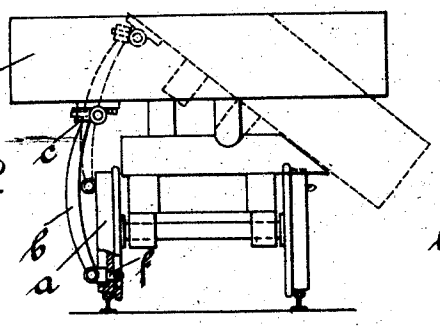


Fig. 5.

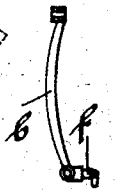


Fig. 3.

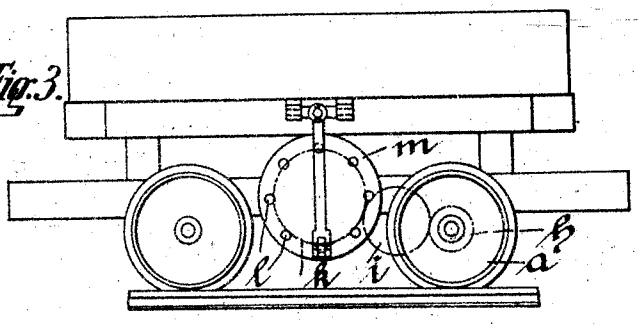
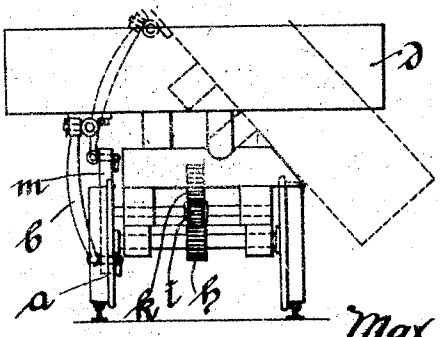


Fig. 4.



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DUMPING-CAR.

No. 905,569. Specification of Letters Patent. Patented Dec. 1, 1908.

Application filed May 18, 1908. Serial No. 433,481.

To all whom it may concern:

Be it known that I, MAX ORENSTEIN, a citizen of the German Empire, residing at Berlin, in the Kingdom of Prussia, German Empire, have invented new and useful Improvements in Dumping-Cars, of which the following is a specification.

My invention relates to an improved, automatically tilting, dumping-car. With prior dumping-cars, such as are employed for the conveyance of sand, earth, stones and the like, the bodies of the various cars must be tipped in succession by hand.

The subject of my invention is a contrivance by means of which the work requisite for tilting the car-bodies is performed by the locomotive employed to draw the train of cars, the bodies of all the latter being tipped automatically during running of the train.

The accompanying drawing, by way of example, shows the invention applied to dumping-cars tilting to one side only.

Figure 1 is a side elevation of a box-bodied dumping-car. Fig. 2 is a front elevation and part section thereof. Fig. 3 is a side elevation of a modification. Fig. 4 is a front elevation thereof. Fig. 5 shows the tilting-lever alone.

The car itself, with its body, may be of any well-known construction and shape.

The improvement consists in each car being furnished with coupling-parts, by means of which the car-body can be coupled with one of the running-wheels of the car (or with a wheel, lever, or the like, actuated by a running-wheel), and by means of which, after coupling has been effected, a moment of torsion sufficient for tilting the car-body is transmitted to the latter by push or pull.

In the car shown in Figs. 1 and 2 a tilting-lever *b* is secured by means of a cross-joint *c* to the bed of the body *d* on the side opposite to that at which the contents are dumped. Ordinarily the lever *b* is held out of use in the horizontal, dotted-line position shown in Fig. 1 by means of a suitable catch *e*. To the free end of the lever *b* there is jointed a pin *f*. In the wheel *a* a number of holes *g* are drilled or otherwise provided at equal distances apart, into which the pin *f* fits. The length of the lever *b* is such that when the body is in its non-tilted position the pin *f* can be inserted into that hole *g* which for the time being is the lowermost.

As each car in succession arrives at the place of dumping, the body *d* and wheel *a* must be coupled by the lever *b* as described. If now the train of cars is drawn forward, or pushed backward, by the locomotive, then on the wheel *a* of each car after coupling making half a rotation, the body *d* will be tilted with positive motion into the dotted-line position shown in Fig. 2. If the train of cars is drawn through a distance represented by more than half a rotation of the wheel, for instance, by several rotations, the body will not only be tilted forward, but will be tilted back again into the normal position, or will be tilted to and fro several times, whereby a better guarantee is offered for complete dumping of the contents of the car.

Between the coupling-parts there may be a suitable amount of play left, so that the body *d*, when once lifted beyond its position of unstable equilibrium, can drop into the end position by gravity.

Instead of connecting the body *d* with the bottom of the wheel *a* by means of a member exerting a push (tilting-lever *b*) on the side opposite to that at which the material is dumped, the body *d* may be connected with the top of the wheel on the dumping side itself. In this event the tilting is done by a pull instead of a push. If in such case there is employed to connect the body *d* and the wheel *a* a member (for example a chain) which can only be used to exert a pull, but not a push, then the car-body will only be tilted forward, but not backward again, so that tilting to and fro cannot be effected.

In the modification shown in Figs. 3 and 4 the body *d* is not connected with a wheel *a* direct, but with a disk *m* presenting holes *l* and driven by one of the wheels *a* by means of suitable gear, such as toothed wheels *h*, *i*, *k*, or chains.

Having thus described my invention, I claim as new:—

1. In a dumping car, a frame, car wheels upon which said frame is mounted, a transversely tilting body pivoted to the frame, and a bar connecting the tilting body with one of the car wheels whereby rotation of the wheels in either direction will tilt and afterwards return the body to its normal position.

2. In a dumping car, a frame, car wheels upon which said frame is mounted, a transversely tilting body pivoted to the frame, and direct connections between the tilting body and one of the car wheels whereby rotation

of the wheels in either direction will tilt and afterwards return the body to its normal position.

3. In a dumping car, a frame, car wheels upon which said frame is mounted, a transversely tilting body pivoted to the frame, and non-flexible connections between the tilting body and one of the car wheels whereby rotation of the wheels in either direction will tilt and afterwards return the body to its normal position.

4. In a dumping-car, a tilting body and car wheels on which it is mounted, and a lever whose upper end is jointed to one side of the said body and whose lower end can be detachably jointed to a point on one of the car wheels when such point is in its lowermost position, whereby on rotation of the said wheel the lever is raised and tilts the car body automatically, substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

MAX ORENSTEIN.

Witnesses:
WOLDEMAR HAUPT,
HENRY HASPER.