Jan. 9, 1940. R. G. SMITH 2,186,737

TOY DUMP CAR

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Fig. 1.

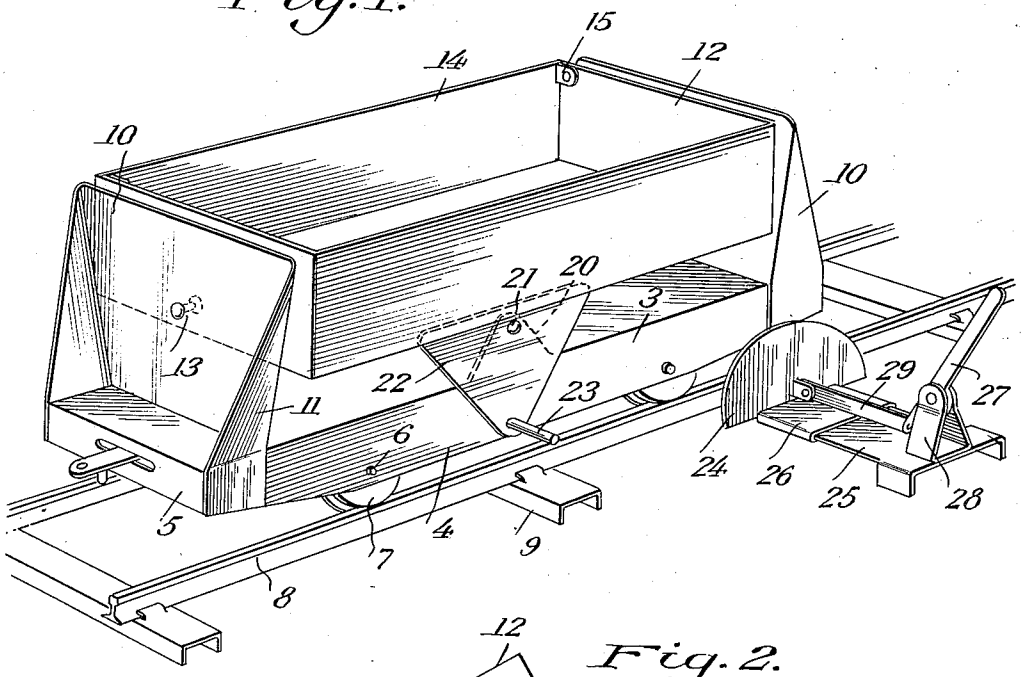
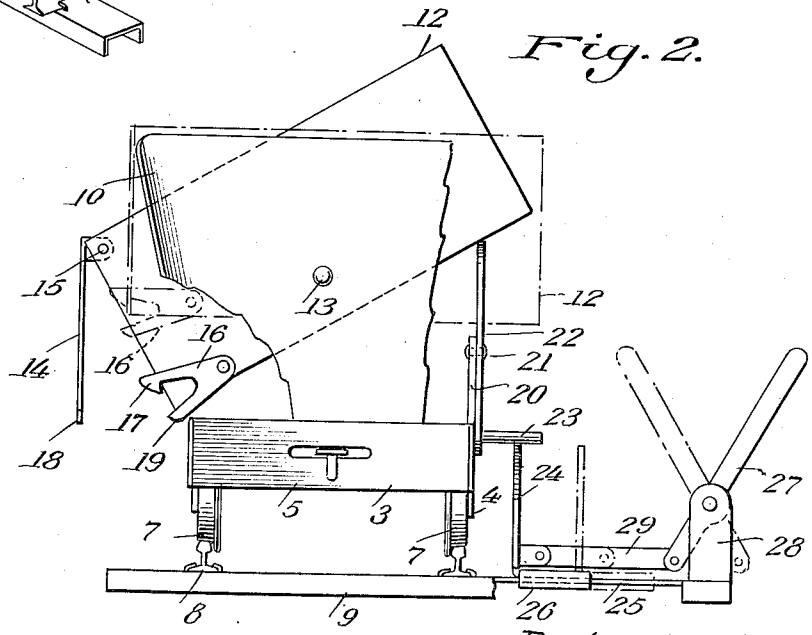


Fig. 2.



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TOY DUMP CAR

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7 Claims. (Cl. 214—62)

The present invention relates to miniature or toy trains and more particularly to freight cars for same adapted for the transportation of sand and gravel, coal and such materials.

The primary object of this invention is to provide a toy railway car, the body of which may contain granular materials and the like, the same being mounted to tilt sideways, thereby effecting the rapid discharge of the contents of the car at the will of the operator.

Another object of the invention resides in the provision of a small and rugged mechanism associated with the dumping car and the railway track by which the car body may be tilted to unload automatically as the car is pulled along the track, the mechanism being so arranged as to be operable in either direction of the car's travel.

A further object is to provide a device of this character on which the side of the car body, being pivotally mounted to facilitate unloading, is held in closed position by a latch, the latch being released coactively with the tilting of the body in unloading position.

With these and other objects in view, the invention consists in the features of construction, combination and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawing, which discloses the preferred embodiment of the invention, and pointed out in the claims hereunto appended.

In the drawing,

Figure 1 is a perspective view of the toy dumping car in position on a railway track preparatory to unloading, and

Figure 2 is an end elevational view similar to Figure 1 but showing the body of the car in tilted unloading position.

Referring now to the accompanying drawing for a more detailed description thereof, the numeral 3 indicates the chassis of the car formed of a metallic plate having marginal portions thereof bent to form depending longitudinal flanges 4 and end flanges 5. The longitudinal flanges 4 form journals for the car axles 6 on which the wheels 7 are carried. A suitable trackway 8 is provided comprising rails held in place by cross ties 9.

At each end of the chassis 3 is provided an upstanding bracket 10, the same being fabricated of a sheet material bent at its sides to form reinforcing flanges 11 by which the brackets 10 are secured to the chassis 3. The brackets 10 form a pivotal mounting for a car body 12, the latter being arranged to swing on a longitudinal axis by means of trunnions 13 journalled in the respective brackets 10.

One longitudinal side 14 of the body 12 is swingably mounted at 15 to swing free of the body 12 when the latter is tilted to dumping position, as shown in Figure 2. The side 14 is normally held in closed position by a latch 16 swingably mounted on the ends of the body 12, the latch 16 having a hooked end 17 adapted to engage a lug 18 extending over the free edge of the side 14. The latch 16 includes an arm 19 arranged to engage an edge of the chassis 3 as the body 12 is swung to tilted position, thereby releasing the side 14 to unload the contents of the car.

A plate bracket 20 is arranged in upstanding position adjacent the longitudinal edge of the chassis 3, the same being formed by cutting out a portion of the plate thereof to be bent into vertical position. The bracket 20 provides a pivotal mounting at 21 for a rockable unloading lever 22. The lever 22 is preferably of triangular outline, presenting a straight edge at the top thereof against which the body 12 normally rests. In this respect it will be noted that the trunnions 13 are disposed slightly off the longitudinal center of the body 12 so that the same will be caused to normally rest against the lever 22.

From the lower corner of the lever 22 extends laterally a tripper bar 23 which, when moved longitudinally of the car in either direction, will actuate the body 12 to tilting position.

To cause the tilting of the car body 12 coactively with the movement of the car along the rails, an arcuate cam 24 is provided. The cam 24 is disposed along side of the trackway 8, being movably secured to the same, and is arcuately formed so that by engagement of the tripper bar 23 the lever 22 will be swung to tilt the car body 12 to dumping position. The cam 24 is slidable to and from operable position by being mounted on a slide plate 25, the cam 24 being bent at right angles to form an integral slide block 26.

A cam actuating lever 27 is pivoted in a bracket 28 intermediate its ends and has its lower end operably engaged to the cam 24 by a connecting link 29. The lever bracket 28 is secured to the outer end of the slide plate 25 so that upon actuation of the lever 27 the cam 24 may be moved to operable or active positions, as shown in Figure 2.

It will be seen from the foregoing that the cam 24 may be readily positioned in the path of travel of the tripper bar 23 and that by actuation of same the body 12 is tilted to dumping position, the side 14 thereof being automatically

released as the latch 16 engages the edge of the chassis 3. In this manner the operator may readily arrange the cam 24 at the desired position along the track so that as the dumping car engages same the load thereof will be readily discharged without necessitating the stopping of the train.

It is to be understood that this improvement is capable of extended application and is not confined to the exact showing of the drawing nor to the precise construction described and, therefore, such changes and modifications may be made therein as do not affect the spirit of the invention nor exceed the scope thereof as expressed in the appended claims.

I claim:

1. A toy dump car comprising a chassis having end brackets, a car body trunnioned on said brackets and weighted at one side thereof, a lever swingably carried on said chassis and engaging the weighted side of said body to support same in normal position, said lever having an eccentric portion for engagement with said body to tilt same to a dumping angle upon actuation of said lever.

2. A toy dump car comprising a chassis having upstanding end brackets, a car body pivotally mounted on said brackets, a lever swingably carried on said chassis and associated with said body to support same in normal position, said lever having an eccentric portion for engagement with said body to tilt same to a dumping angle upon actuation of said lever, said body including a hingedly connected side and a latch normally holding said side against said body and adapted to be released by engagement with said chassis as the body is tilted to dumping angle.

3. A toy dump car comprising a chassis, a car body pivotally mounted on the chassis, a chassis supported rocker member having a normal position in which it supports the body in load carrying position, a projecting arm carried by the rocker member and adapted to swing the rocker member to shift the body to dumping position, a track for said car, cam means adjacent said track adapted to engage said arm and actuate said rocker member, and cam operating means comprising a cam carriage slidable laterally of said track and means for slidably moving said carriage.

4. A toy dump car comprising a chassis, a car body pivotally mounted on said chassis, a bracket positioned adjacent a longitudinal edge of said chassis, a lever pivotally mounted on said bracket and associated with said body to support same in normal position, said lever having an eccentric portion for engagement with said body to tilt same to a dumping angle upon actuation of said lever.

5. A toy dump car comprising a chassis, a car body pivotally mounted on said chassis, a bracket positioned adjacent a longitudinal edge of said chassis, a lever pivotally mounted on said bracket and associated with said body to support same in normal position, said lever being substantially triangular shaped and when actuated engages said body to tilt same in dumping position.

6. A toy dump car comprising a chassis having upstanding end brackets, a car body pivotally mounted on said brackets, a bracket positioned adjacent a longitudinal edge of said chassis, a lever pivotally mounted on said bracket and associated with said body to support same in normal position, said lever having an eccentric portion or engagement with said body to tilt same to a dumping angle upon actuation of said lever.

7. In a toy car dumping device, the combination of a chassis, a load-carrying car pivotally mounted on said chassis, a lever swingably carried on said chassis and having an eccentric associated with said body whereby, upon actuation of said lever, said body is tilted to a dumping angle, of a trackway for said car, means adjacent said trackway adapted to actuate said lever, said means comprising telescoping plates, a cam member mounted on one of said plates and a lever pivotally carried by the other plate for slidably actuating said cam.

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