July 21, 1942. R. G. SMITH 2,290,844

UNLOADING TOY VEHICLE AND OPERATING DEVICE FOR THE SAME

Filed April 20, 1940

Fig. 1.

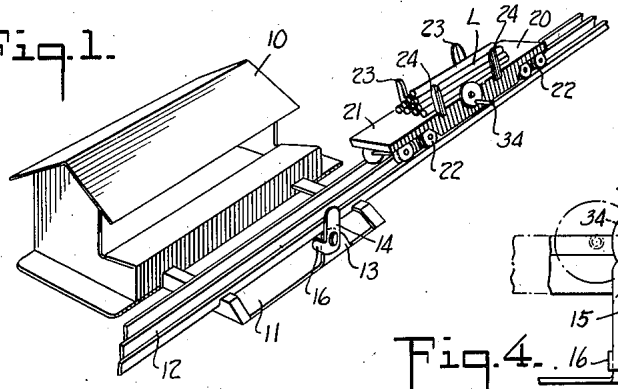


Fig. 6.

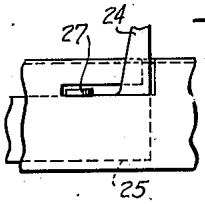


Fig. 5.

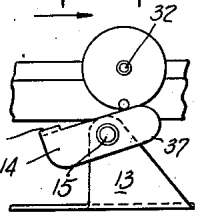


Fig. 4.

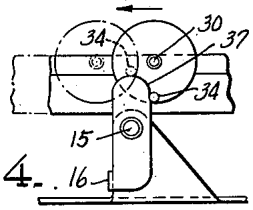


Fig. 2.

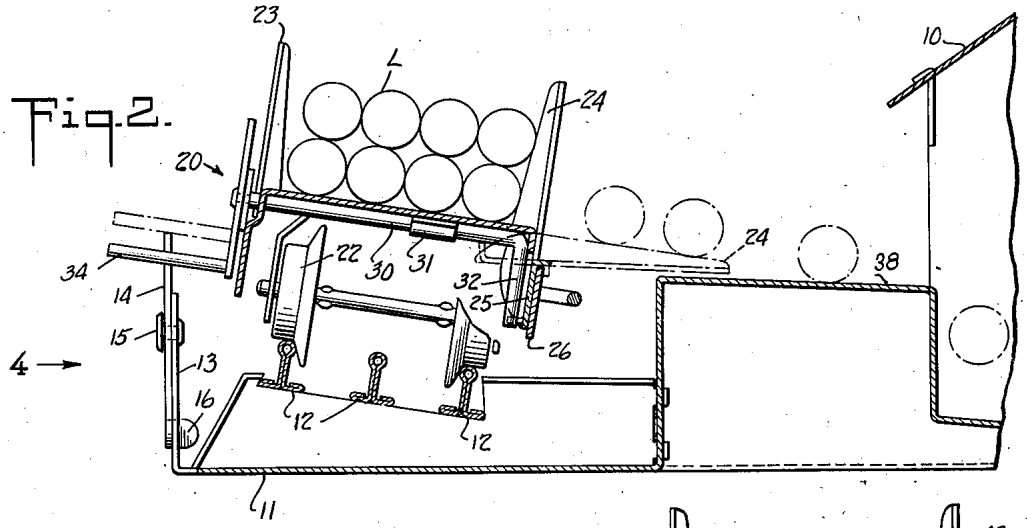


Fig. 3.

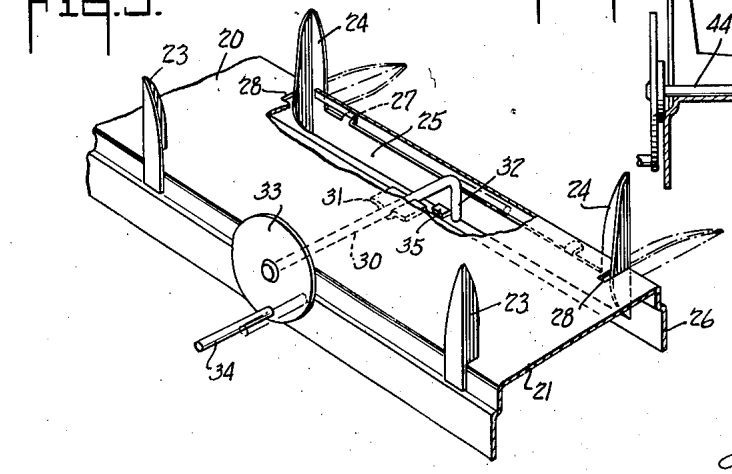
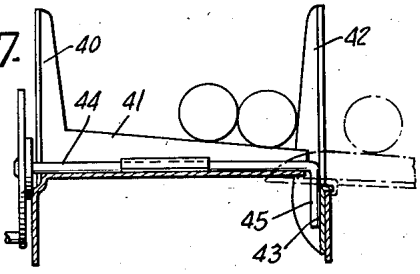


Fig. 7.



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UNLOADING TOY VEHICLE AND OPERATING DEVICE FOR THE SAME

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2 Claims. (Cl. 46—218)

The present invention relates to unloading toy vehicles and operating devices for the same, and is more particularly directed toward toy cars suitable for use on toy railroad tracks having load carrying devices which may be actuated to releasing position so that the load is discharged.

The toy car contemplated by the present invention has preferably fixed and movable stakes, the movable stakes being normally located in upright position and releasable so that a load such as logs carried by the vehicle will lower the stakes so that the load may be discharged laterally. Where the toy is to be entirely mechanically operated the operating means for releasing the stakes may be in the form of an obstruction along the track adapted to be engaged by a car carrying element.

Other and further objects will appear as the description proceeds.

The accompanying drawing shows, for purposes of illustrating the present invention, two of the many embodiments in which the invention may take form, it being understood that the drawing is illustrative of the invention rather than limiting the same.

In this drawing:

Figure 1 is a perspective view of a toy car adapted for carrying logs and a toy mill into which the logs may be discharged;

Figure 2 is a transverse sectional view through the mill, the car and track;

Figure 3 is a fragmentary perspective view of the car at an enlarged scale;

Figure 4 and 5 are fragmentary elevational views taken in the direction of the arrow 4 and showing the operation of the device when the car is going to the left and to the right, respectively;

Figure 6 is a fragmentary elevational view taken from the right of the car as it appears in Figure 2; and

Figure 7 is a fragmentary sectional view through a modified form of construction.

In the drawing a toy mill is illustrated at 10. It has an extension 11 adapted to support a toy railroad track in tilted position as indicated by the rails 12. It also has an upwardly extending bracket 13 supporting a lever 14 pivoted at 15. The lever 14 hangs down, as indicated in Figures 1, 4 and 5, and has an ear 16 which engages the side of the bracket 13 and limits movement of the lever in a counterclockwise direction as viewed in Figure 4. The upper end of the lever extends up alongside the car indicated generally at 20.

The car 20 has a platform 21 and wheeled trucks 22, 22 of conventional form. The car body has two upwardly extending fixed stakes 23, 23 on one side. It also has two opposed movable stakes 24, 24. These movable stakes may conveniently be made out of a piece of sheet metal which has a lower connecting portion 25 below the platform 21 and inside the side flange 26. This piece of sheet metal 25 has two outwardly extending ears 27 appearing more clearly in Figure 6, and these ears and the stakes 24 pass through a suitable opening 28 formed in the platform and side flange of the car. These ears form supports for the stakes and pivots about which they can turn as will be apparent from the drawing. The stakes are biased to the vertical position by the weight of the connecting piece 25.

A shaft 30 extends transversely of the car body under the platform and is held in place by a strap 31. It has a crank 32 adjacent the connecting piece 25 and at the other end carries a wheel 33 and an outwardly extending rod 34. The lower end of the crank arm 32 engages an abutment 35 carried by the connecting piece 25. When the parts are in the position indicated in Figures 1, 2 and 3 in full lines all four stakes are vertical or nearly vertical depending upon whether the car is on level or tilted track. The stakes 24 will normally be vertical and the shaft 30 will normally be in the position indicated owing to the weight of the crank arm 34 and the crank arm 32. The car will then support a load of logs indicated at L.

When the loaded car moves from the position shown in Figure 1 to the position shown in Figure 2 or to the left as indicated in Figure 4 the crank arm engages the upper end of the obstruction forming lever 14. This will cause the crank shaft 30 to be turned as the crank 34 rides up the cam surface 37 of the upper end of lever 14 thereby turning the crank shaft, as indicated in dot and dash lines Figure 4. This will move the crank arm 32 away from the connecting piece 25 intermediate the movable stakes and the stakes can then swing down to the dot and dash line position indicated in Figure 2. This swinging is brought about by the tendency of the logs to roll off the car and also by reason of the tilting of the track. The stakes form a bridge extending to the platform 38.

Should the car proceed in the other direction the unloading device will not function as the lever 14 will tilt as indicated in Figure 5 to allow the car carrying mechanism to pass by without being moved.

In the arrangement shown in Figure 7 the car body has fixed stakes **40**, a sloping bottom **41**, and tiltable stakes **42** connected together by a connecting piece **43** and mounted in the car body the same as before. In this case the stakes are held in place by a crank **44** disposed above the platform instead of below and having an arm **45** extending down into engagement with the connecting piece **43**.

It is obvious that the invention may be embodied in many forms and constructions within the scope of the claims and I wish it to be understood that the particular forms shown are but a few of the many forms. Various modifications and changes being possible, I do not otherwise limit myself in any way with respect thereto.

What is claimed is:

1. A toy vehicle having a body, a pair of fixed stakes extending upwardly from the body, a pair of movable stakes opposite the fixed stakes, the stakes being adapted to retain a load of toy logs extending lengthwise of the body, the movable stakes being swingable outwardly to a horizontal position, a locking device for holding the stakes in the upper position, and means for releasing the locking device so that the load may urge the released stakes outward and then roll laterally across the lowered stakes to be discharged to one side of the vehicle, the releasing means including a rockable shaft extending transversely of the vehicle body, a crank arm engageable with a connecting device intermediate the movable stakes and a second crank external of the vehicle body for rotating the shaft.

2. A toy comprising a wheeled, log carrying vehicle having a pair of fixed stakes along one side, a pair of outwardly swingable stakes opposite the fixed stakes adapted to support a load of logs therebetween, means for releasably locking the movable stakes in vertical position to hold a load between the fixed and movable stakes, a stop limiting the lowering of the stakes, and a laterally disposed load receiving device, the movable stakes when released being swung down against the stop to form a bridge extending laterally from the side of the vehicle and above the load receiving device.

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