Dec. 15, 1942. F. PETTIT 2,305,491

TOY VEHICLE

Filed Nov. 9, 1939

Fig. 1.

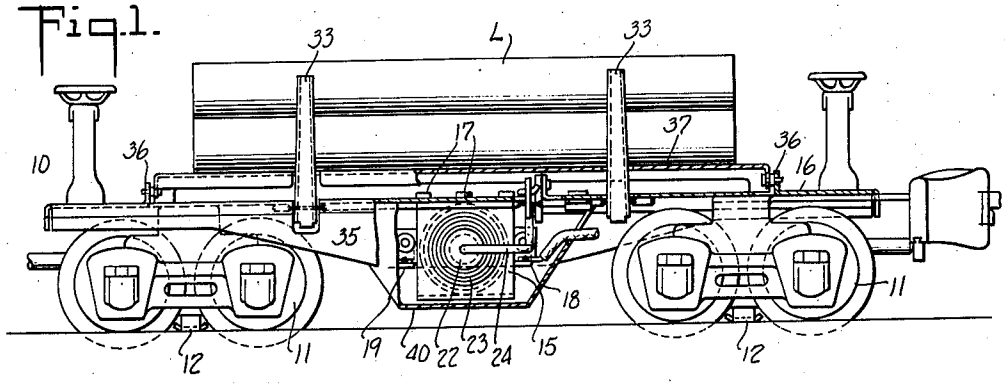


Fig. 2.

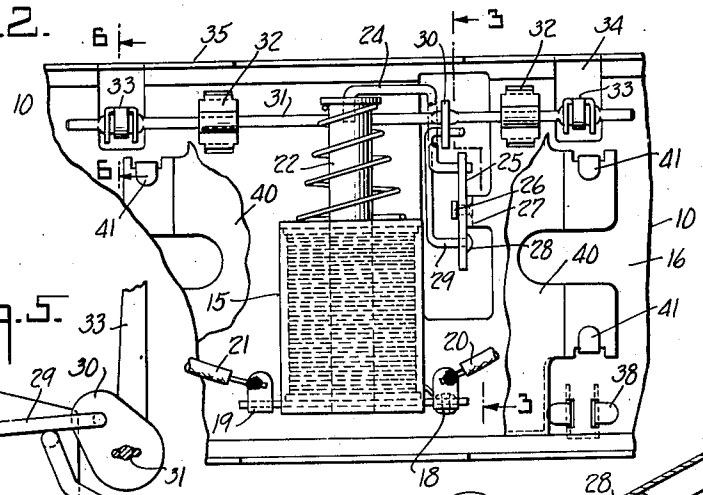


Fig. 6.

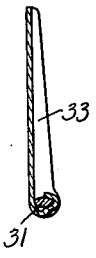


Fig. 5.

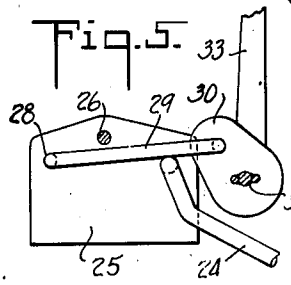
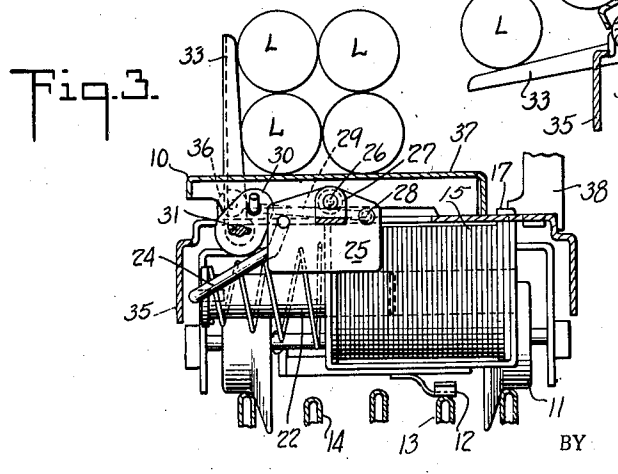


Fig. 3.



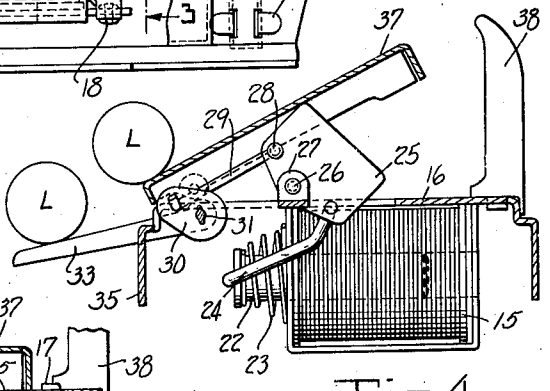


Fig. 4.

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TOY VEHICLE

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Application November 9, 1939, Serial No. 303,616

7 Claims. (Cl. 46—214)

The present invention relates to toys, and is more particularly directed toward toy freight cars of a type adapted to carry logs and to log loading devices.

The present invention contemplates a toy car or log loading device having swingable side stakes and preferably provided with a tiltable bottom, the stakes and bottom being arranged to facilitate the discharge of a load of toy logs or the like carried by the tiltable platform.

According to the present invention the stakes and tiltable bottom are preferably operated by a magnet coil adapted to be energized from a remote control circuit.

The accompanying drawing shows, for purposes of illustrating the present invention, one 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 the drawing:

Figure 1 is a side elevational view of a toy car with parts broken away and parts in section;

Figure 2 is an inverted plan view of the same on an enlarged scale;

Figure 3 is a transverse sectional view on the line 3—3 of Figure 2, the swingable stakes being vertical and the tiltable platform horizontal;

Figure 4 is a view similar to Figure 3 showing the stakes and platform shifted to the load discharging position;

Figure 5 is a diagrammatic fragmentary view illustrating the toggle connections and taken in a direction opposite to that of Figures 3 and 4; and

Figure 6 is a fragmentary sectional view on the line 6—6 of Figure 2.

The toy car has a body generally indicated at 10 carried on toy trucks 11, 11 as usual. These trucks are preferably of the type which embody electromagnetically operated uncoupling devices and each truck has a collector shoe 12 adapted to bear on one or the other of the rails 13 or 14 of Figure 3. One of these rails may be brought to third rail potential, while the other rail is grounded by means of a switch forming no part of the present invention, and in this way two collector shoes on one car may be connected to the source of propulsion current.

A magnet coil 15 is secured to the platform 16 of the car body by bent over prongs as indicated at 17. The terminals 18 and 19 of the coil are connected by wires 20 and 21 with the collector shoes 12. The magnet 15 has an armature 22 adapted to be moved from the position of Figure 3 to the position of Figure 4 when current is applied to the rails 13 and 14. When the circuit is open a spring 23 returns the armature to the position of Figure 3.

The end of the armature is connected to a bent wire member 24 which extends toward the opposite side of the car body where it connects with a rocker plate 25 pivoted at 26 on an upwardly bent apertured ear 27 formed out of the stamping 16. The rocker plate 25 is connected at 28 with a link 29 which extends forwardly and is connected to an arm 30 carried by a rockable shaft 31. The link 29 passes close by the upper end of the link 24 so that when the spring 23 restores the armature to normal position the end of the link 24 is brought against the link 29. At this time the connection 28 between the plate 25 and rod 29 is below a line passing between the pivot point 26 of the rocker plate 25 and the point at which the link 29 is connected to the arm 30, so that it is impossible to turn the arm 30 in a clockwise direction as indicated in Figure 5. The shaft 31 is secured to the underface of the platform 16 by clips indicated at 32. The rod or shaft 31 is flattened, as indicated in Figure 6 and is secured to the lower ends of two stakes 33, 33. These stakes extend up through cutouts 34 in the platform 16 of the car and the side frame element 35. The platform 16 is also provided with two upwardly extending apertured ears 36, 36 which pivotally receive a tiltable platform 37. The car body also carries fixed stakes 38 which are opposite the swingable stakes.

When the parts are in the position indicated in Figure 3 the toy car can receive a load of logs such as indicated at L. These logs will be held between the stakes as is obvious. The swingable stakes cannot move outwardly because of the toggle connection above referred to.

When the magnet is energized the armature is withdrawn and the parts swung to the position shown in Figure 4. The rocker plate 25 is brought against the platform tilting it as indicated, and the linkages act to swing the stakes down as shown, thereby facilitating the discharge of the load into a suitable receptacle. Deenergization of the coil causes the spring 23 to restore the parts to normal position. The operating parts are preferably protected by a cover 40 secured to the platform 16 by bent over prongs 41.

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 form shown is but one

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 having a body provided with a relatively fixed plate, downwardly swingable stakes along one side of the plate, a platform above the plate and behind the stakes, the platform being tiltable about an axis adjacent the lower ends of the stakes, a magnet coil, an armature therefor, an armature restoring spring, and connections between the armature and the platform and swingable stakes for simultaneously tilting the platform and swinging the stakes downwardly when the coil is energized.

2. A toy such as claimed in claim 1, wherein the connections include a toggle adapted to be overset by the spring when the coil is deenergized to lock the stakes against swinging movement.

3. A toy having a body provided with a relatively fixed plate, downwardly swingable stakes along one side of the plate, a platform above the plate and behind the stakes, the platform being tiltable about an axis adjacent the lower ends of the stakes, a magnet coil, an armature therefor, an armature restoring spring, a swingable plate pivoted to the body and disposed under the platform, a plate operating link connecting the swingable plate and armature, and a stake swinging linkage connected to the swingable plate, the platform being tilted when the armature swings the plate into contact with the bottom of the platform upon energization of the coil.

4. A toy having a body provided with a relatively fixed plate, downwardly swingable stakes along one side of the plate, a shaft interconnecting the stakes, a platform above the plate and behind the stakes, the platform being tiltable about an axis adjacent the lower ends of the stakes, a magnet coil, an armature therefor, an armature restoring spring, and connections between the armature and the platform and shaft for simultaneously tilting the platform and swinging the stakes.

5. A toy adapted to discharge toy logs and having a fixed platform provided with upwardly extending apertured lugs adjacent one side edge, a normally horizontal log supporting platform pivotally secured to said lugs so as to be tilted to discharge the logs, a rocker plate pivoted to the fixed platform on a longitudinally extending axis under the mid portion of the tiltable platform and swingable to raise one side of the tiltable platform, a magnet coil below the fixed platform, an armature therefor, and a link connecting the armature and rocker plate to swing the latter.

6. A toy such as claimed in claim 5, having upwardly extending stakes pivotally secured to the fixed platform adjacent the pivoted edge of the tiltable platform and swingable to a horizontal position, and a link operably connecting the rocker plate and swingable stakes.

7. A top comprising a fixed platform with a depending side, notches cut into the edge of the platform and the side to provide openings extending across the corner formed by the platform and side, a rod pivotally secured to the underside of the platform adjacent said corner, stakes fixed to the rod and extending vertically through the openings, a magnet coil, an armature therefor, an armature restoring spring, and operating connections between the armature and rod for swinging the stakes down from a vertical position to a horizontal position, the connections including a toggle overset by the armature restoring spring and acting to lock the stakes in vertical position.

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