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LOCOMOTIVE WHEELED TOY

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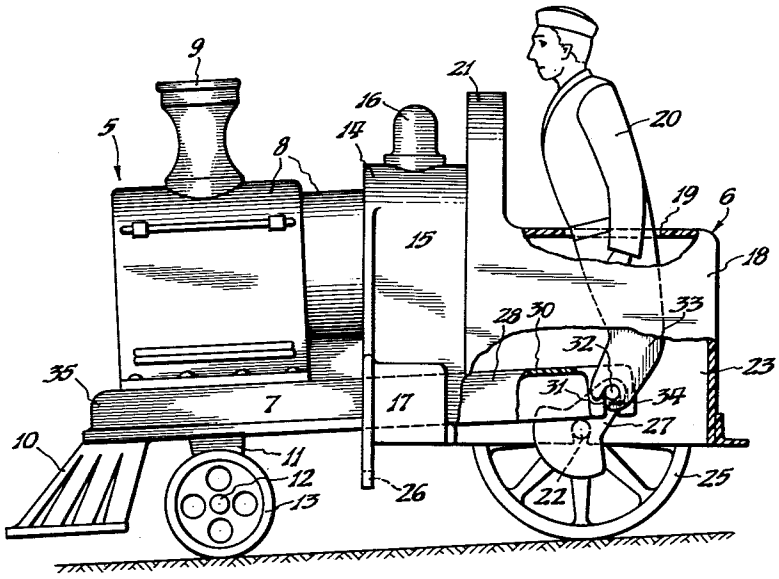


Fig. 1.

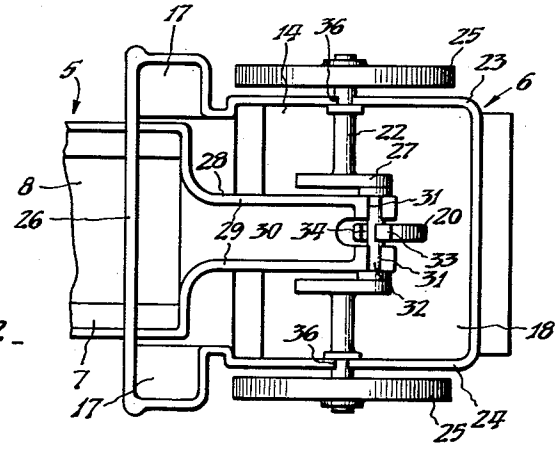


Fig. 2.

Inventor
Thomas W. Hore

By James D. Beaman
Attorney

United States Patent Office

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LOCOMOTIVE WHEELED TOY

Thomas William Hore, North Balwyn, Victoria, Australia

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6 Claims. (Cl. 46—107)

This invention relates to an improved wheeled toy for towing by children on a floor or other surface, and in which certain parts or elements are relatively movable responsive to the towing movement to have an amusing action or effect especially attractive to children.

The principal objective of this invention is to provide an improved toy having the above characteristics which is simple and inexpensive in construction, attractive in appearance and durable in use, and which can be manufactured of plastic material by moulding.

In achieving the above stated principal objective and according to the invention, a wheeled toy comprises at least two articulated sections relatively reciprocable and angularly movable by rotary means on a rotatable axle of the vehicle.

At least one reciprocable member to represent the figure of the driver of the vehicle or a passenger therein may be operatively connected with the rotary means for angular movement and guided for upward and downward reciprocation by the rotary means, whereby the attractiveness of the vehicle to children is enhanced.

In a more specific construction, the toy vehicle is shaped to represent a locomotive engine and is comprised of forward and rearward sections, the forward section slidably fitting within the rearward section, a cranked axle rotatably mounted in the rearward section, driving wheels secured to and supporting the cranked axle, and an extension of the forward section drive-connected with the cranked axle and operable responsive to rotation of the cranked axle to reciprocate the forward section and angularly move both sections in opposite directions.

A figure representing an engine driver may be carried on the rearward section and extended through an aperture in the upper side of the latter for drive connection with the cranked axle whereby the figure is angularly moved and upwardly and downwardly reciprocated through the aperture.

The invention will be more clearly understood from the following description of an embodiment of a toy locomotive as depicted in the accompanying drawings.

In these drawings:

Fig. 1 is a sectional side elevation of the locomotive certain parts being omitted for clearer illustration.

Fig. 2 is a part inverted plan view of the locomotive.

Referring to these drawings in more detail, the toy locomotive is comprised of a forward or leading section **5** and a rear or trailing section **6**, each moulded in one piece of a suitable plastic material.

The forward section 5 comprises a frame **7** having integral therewith a front boiler portion **8** fitted with a smoke stack **9**, a cow-catcher **10**, and oppositely disposed spaced brackets **11** depending from the frame **7** and in which are journaled the opposite ends of a front axle **12** supported upon wheels **13** carrying the forward or leading end of the locomotive.

The rear section **6** of the locomotive is open at the front end and consists of a complementary frame **14** having integral therewith a rear boiler portion **15** fitted

with a steam dome **16**, oppositely disposed projections representing steam cylinders **17**, an inverted box portion **18** open at the underside and having an aperture **19** in the upper side in which is guided a movable figure **20** representing an engine driver, and a shield or spectacle plate **21** at the forward part of the box portion **18**.

The complementary frame portion **14** is mounted upon a rear axle **22** journaled in the opposite sides **23—24** of the box portion **18** and secured to driving wheels **25**.

The forward section **5** and the rear section **6** are adapted for relative angular and reciprocatory movements, and to this end the forward section **5** extends rearwardly within the open end of the rear section **6**, the frame **7** being slidably and freely fitted in the complementary frame **14** the opposite sides of which are connected together by a bracing strip **26**, while the front boiler portion **8** is similarly fitted in the rear boiler portion **15**.

In order to effect relative angular and reciprocatory movements of the sections **5** and **6** of the locomotive and to impart similar movements to the figure **20**, the rear axle **22** is formed with a centrally located crank **27** with which is connected a rear centrally located beam **28** integral with and extending rearwardly from the frame **7**.

The beam **28** is of channel section having opposite flanges or sides **29** and a web **30** connecting the flanges.

At the rear end the flanges **29** are thickened and provided with slots **31** engaged by the crank pin **32**.

The lower end or foot **33** of the engine driver figure **20** is positioned between the slotted flanges **29** and is formed with a slot **34** engaged by the crank pin **32**.

An aperture (not shown) is provided in the front end **35** of the frame **7** for attachment of a cord or string whereby the toy locomotive is towed about by a child.

In use, and as the toy locomotive is towed, the rear wheels **25** in traversing a floor or other surface rotate the central crank **27** of the rear axle **22** thereby through the medium of the beam **28** reciprocating and angularly moving the forward section **5** which by its slidable engagement with the rearward section **6** rocks the latter section upon the rear axle **22**.

Simultaneously, the rotation of the central crank **27** causes the engine driver figure **20** to alternately rise and fall through the guiding aperture **19** in the upper side of the inverted box portion **18** and move angularly thereto.

The rocking of the forward and rearward sections **5** and **6** of the locomotive and simultaneous movements of the engine driver **20** are very amusing and attractive, particularly to children.

The rear axle **22** is journaled in slots **36** in the opposite sides **23** and **24** of the box portion **18**, the entrance of the slots being slightly constricted or narrowed, so that the axle **22** is snapped into engagement and retained in the slots by the constriction.

The front axle **12** is similarly engageable with and retained by constricted bearing slots in the opposite brackets **11**.

Moreover, the slots **31** in the extension or beam **28** and the slot **34** in the foot of the engine driver figure **20** are also constricted for snap engagement with the crank pin **32** of the central crank **27** of the rear axle **22**.

Accordingly, it will be understood that in view of the snap engagement of the various parts, the toy locomotive may be readily assembled and dismantled as and when required.

Although the practical arrangement herein described and illustrated is related to a toy locomotive it is to be understood that the invention may be applied to other toy vehicles such as road rollers, steam rollers, traction engines, bull dozers and the like.

I claim:

1. A toy vehicle shaped to represent a locomotive and comprised of forward and rearward articulated sections, the forward section slidably fitting within the rearward section, a cranked axle rotatably mounted in the rearward section, driving wheels secured to and supporting the cranked axle, and an extension of the forward section drive-connected with the cranked axle and operable responsive to rotation of the cranked axle to reciprocate the forward section and angularly move both sections in opposite directions.

2. A toy vehicle shaped to represent a locomotive and constructed according to claim 1, wherein a figure representing an engine driver extends in upright position through an aperture in the upper side of the rearward section and is guided by the aperture and operatively connected to the cranked axle for angular movement and upward and downward reciprocation.

3. A toy vehicle shaped to represent a locomotive and comprising a front axle, a rear driving axle, a rearward section pivotally supported upon the rear driving axle, a forward section pivotally supported upon the front axle and freely engaging the rearward section, and a crank on the rear driving axle connected to the forward section and operable responsive to rotation of said driving axle to reciprocate the forward section and oscillate the forward and rearward sections in opposite directions about the front axle and the rear driving axle respectively.

4. A toy vehicle shaped to represent a locomotive and having a front axle, a rear cranked axle, a front boiler section pivotally supported upon the front axle, a rear boiler section open at the front end pivotally supported upon the rear cranked axle and complementary to and slidably engaged by the front boiler section, and means drive-connecting the cranked axle with the front boiler section and operable responsive to rotation of the cranked axle to reciprocate and angularly move the front boiler section about the front axle and thereby impart to the rear boiler section angular movements about the rear cranked axle in directions opposite to the angular movements of the front boiler section.

5. A toy locomotive vehicle as claimed in claim 4, having an inverted open box portion integral with and comprising an extension of the rear boiler section, and a movable upright figure representing an engine driver guidedly extended through an aperture in the upper closed side of the integral box portion and operatively connected with the cranked axle.

6. A toy vehicle shaped to represent a locomotive and comprising a front axle, a rear axle, a centrally disposed crank on the rear axle, a forwardly extended frame pivotally supported upon the front axle, a front boiler section integral with the forwardly extended frame, a rearwardly extended frame pivotally supported upon the rear axle and complementary to and slidably engaged by the forwardly extended frame, a rear boiler section open at the front end integral with the rearwardly extended frame and complementary to and slidably engaged by the front boiler section, and a centrally disposed member integral with and extending rearwardly from the forwardly extended frame and operatively connected with the centrally disposed crank.

References Cited in the file of this patent

UNITED STATES PATENTS

2,527,470 Vogini ---------- Oct. 24, 1950