May 6, 1958 M. E. DUNSTAN 2,833,083

WHEELED TOY

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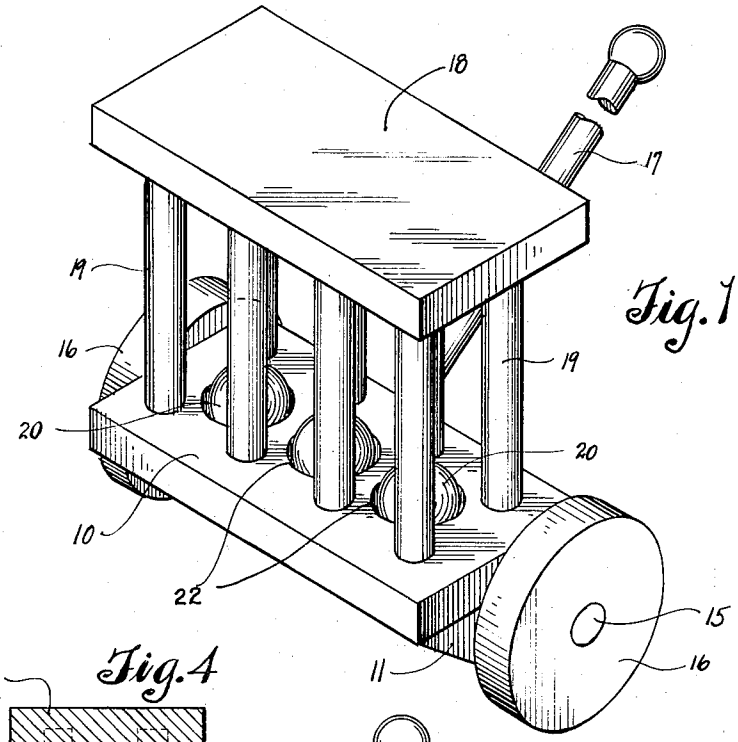


Fig. 1

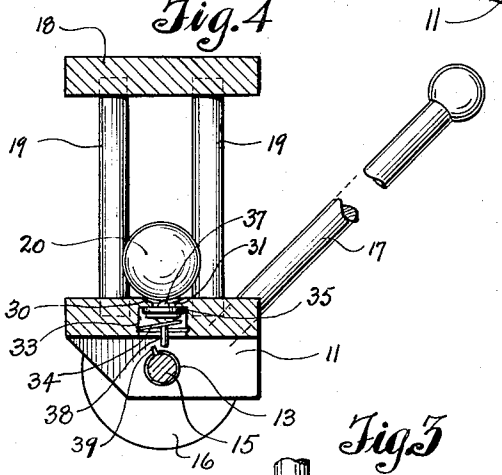


Fig. 4

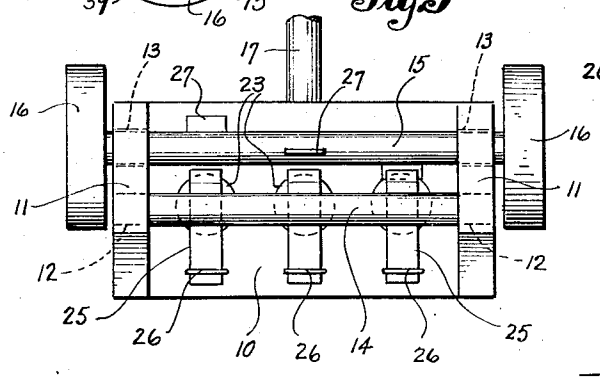


Fig. 3

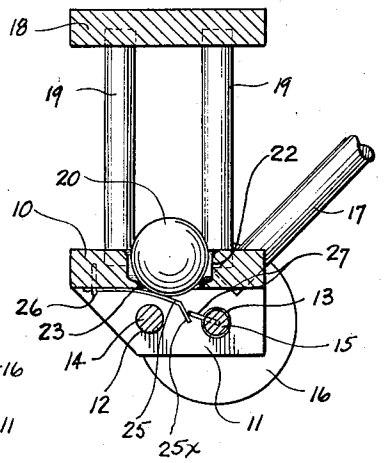


Fig. 2

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WHEELED TOY

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3 Claims. (Cl. 46—114)

This invention relates to toys designed for the amusement of children, and it has reference more particularly to a wheel supported, cart-type toy of novel kind with a tongue, or handle, whereby it may be drawn or pushed.

It is the principal object of this invention to provide a toy of the above stated character comprising a novel and attractive form of cart including a cage in which a plurality of balls are held captive, and which cart has a supporting axle that is caused to rotate with the turning of the cart supporting wheels and is equipped with means for keeping the balls, as confined in the cage, in bouncing motion as the toy is drawn or pushed along a surface.

It is a further object of the present invention to provide a toy that is attractive to children; safe for them to use; sturdy in its construction; long lasting, and relatively inexpensive to manufacture.

Further objects of the invention reside in the specific details of construction of the parts of the device and in their combination and mode of operation, as will hereinafter be fully described.

In accomplishing the above mentioned and other objects of the invention, I have provided the improved details of construction, the preferred forms of which are illustrated in the accompanying drawings, wherein:

Fig. 1 is an isometric view of a toy embodying the novel features of the present invention therein.

Fig. 2 is a vertical cross-section of the same, showing the actuator means for one of the captive balls.

Fig. 3 is an underside view of the toy.

Fig. 4 is a cross-sectional view of a toy of an alternative form of construction.

Referring more in detail to the drawings:

In its present preferred form of construction as disclosed in Figs. 1, 2 and 3, the toy comprises a horizontally disposed base plate **10**, of an elongated, rectangular form, to the opposite ends of which, and at its underside, bearing blocks **11—11** are rigidly fixed; these blocks being directed transversely of the end portions of the plate **10** as well as shown in Fig. 3.

Each of the blocks **11** is formed with two holes **12** and **13**, bored therethrough and similarly located in the two blocks, and as applied to the two blocks, are axially aligned. Extended between the blocks, and fixed at its opposite ends in the holes **12** thereof is a connecting or brace bar **14**, and extended through the axially aligned holes **13—13** and somewhat beyond the blocks **11—11**, is a supporting axle **15**. This is freely revoluble in the holes, and at its opposite ends has wheels **16—16** fixed thereon which support the toy for rolling travel. For the pulling or pushing of the toy, a tongue **17** is fixed in the plate **10** at a point midway of its opposite ends, and extends upwardly and forwardly therefrom as has been shown in Fig. 2.

Supported from and directly above the base plate **10**, and parallel therewith, is a top plate **18**; this being supported by means of two rows of vertical posts **19**, each of which is fixed at its opposite ends in the plates. The posts in each of the two rows are equally spaced apart,

and the rows are spaced apart a distance equal to the spacing of posts in the rows. Also, the posts of the two rows are in alignment transversely of the base **10**.

Contained between the two rows of posts, each of which rows is herein shown to comprise four posts, are three wooden balls **20**. The diameter of each ball is slightly greater than the distance between posts, as is shown in Fig. 2. Therefore, each ball is retained captive within an individual cage that is defined by the upper and lower plates **10** and **18** and four adjacent posts in the two rows. Each ball, while thus retained, is free for bouncing movement between the confining posts.

Formed in the top surface of the base plate **10** and in alignment lengthwise of the plate, are circular holes or sockets **22** in which the balls **20** are adapted to come to rest, as shown in Fig. 1, when the cart is not in motion.

In the bottom of each socket and concentric thereof, is a hole **23** having a diameter that is lesser than that of the socket and within which the ball can be seated as seen in Fig. 2. In such position, the ball projects just slightly below the bottom surface of the plate **10**.

Fixed to the underside of the base plate **10** and aligned with the holes **23**, are leaf springs **25**; each spring being secured in position by a staple **26** that is applied over one end thereof. The free ends of the three leaf springs extend, respectively, across the three holes **23**, and each spring terminates in a downwardly inclined end portion **25***x*, seen in Fig. 2, that is disposed at one side of the axle **15**. Fixed in the axle **15** are plates **27** which are adapted, when the axle rotates, to engage with the end of the corresponding spring **25**, thus to flex and then release the spring so that it will snap against and drive the corresponding ball upwardly and cause it to bounce up and down between the posts whereby it is confined. Thus, as the toy is drawn or pushed along a surface and the axle **15** is revolved by the wheels **16**, the balls **20** will be kept in constant bouncing motion, each time coming to rest in a socket **22** and hole **23** for impingement by the actuating spring **25**.

In Fig. 4, I have shown an alternative form of cart construction, which comprises parts which for the most part are arranged in a manner similar to the arrangement of parts in the cart already described, but in which the connecting bar **14** is omitted and the axle **15** is located in the central longitudinal plane of the plate **10**. Formed in the plate **10** are depressions **30** for seating the balls **20** therein, and in the base of each depression is a small hole **31** opening into a socket **33** of larger diameter that is bored upwardly into the plate, and opens to the bottom thereof.

Fixedly supported in each of the sockets **33**, is a coiled spring **34** that bears upwardly against a disk **35** that, in turn is seated against the bottom of the sockets, and on which disk a knob **37** is formed and extends upwardly into contact with the corresponding ball **20** when the ball is rested in the depression. Fixed rigidly to and extended downwardly from the disks **35** are stems **38**, terminating just above the level of axle **15**. Fixed radially in the axle and extended therefrom are plates **39** which will engage the stems **38** as the shaft is rotated, thus to cause a snapping action of the disks whereby the disk knob will cause the bouncing action of the balls.

Toys of the character described are attractive to children, safe for them to use, long lasting and inexpensive. They may be made in various sizes, and of various materials, and each may be made to accommodate one or more of the balls **20**.

Having thus described my invention, what I claim as new therein and desire to secure by Letters Patent is:

1. A toy comprising, base plate means, substantially parallel rows of substantially parallel posts carried by said

base plate means and extending upwardly therefrom, there being the same number of posts in each of said rows thereof with the corresponding posts of said rows thereof being substantially aligned, thereby defining a number of ball confining cages equal to one less than the number of said posts in each of said rows thereof, the posts of each of said rows thereof being substantially equally spaced and said rows of posts being spaced apart a distance substantially equal to the spacing between the posts of each of said rows thereof, whereby said cages are of generally square cross sectional configuration, a ball having a diameter exceeding the space between adjacent of said posts movably confined within each of said cages, said balls having a normal position of rest adjacent the lower ends of said cages, means supporting said base plate means for movement along a supporting surface, resilient actuating means positioned adjacent said lower cage ends for engaging said balls, and means for alternately retracting and abruptly releasing said actuating means to periodically snap said balls away from their positions of rest as said toy is moved along a supporting surface.

2. A toy as set forth in claim 1 wherein said last-named means are arranged to retract and release said actuating means in accord with the predetermined sequence.

3. A toy comprising, a base plate means, axle means journaled on said base plate means, wheel means carried by said axle means and supporting the toy for rolling

movement along a supporting surface, said axle means rotating with said wheel means, normally generally upright ball confining means carried by said base plate means, a ball movably disposed within said confining means, resilient actuating means positioned adjacent the lower end of said confining means for engaging said ball, and means on said axle means for alternately retracting and suddenly releasing said actuating means to periodically snap said ball upwardly in said confining means as said toy is rolled along a supporting surface, wherein said base plate means has a socket therein, and wherein said actuating means includes coil spring means alined with said socket, a disk-like member supported on said spring means for engaging said ball, said disk-like member being movable within said socket, and a stem fixed to said disk-like member and extending downwardly therefrom through said spring means for being engaged by said means on said axle means.

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