Sept. 2, 1941. J. S. LARKINS, JR. 2,254,967

MECHANICAL TOY

Filed March 19, 1941

Fig. 1.

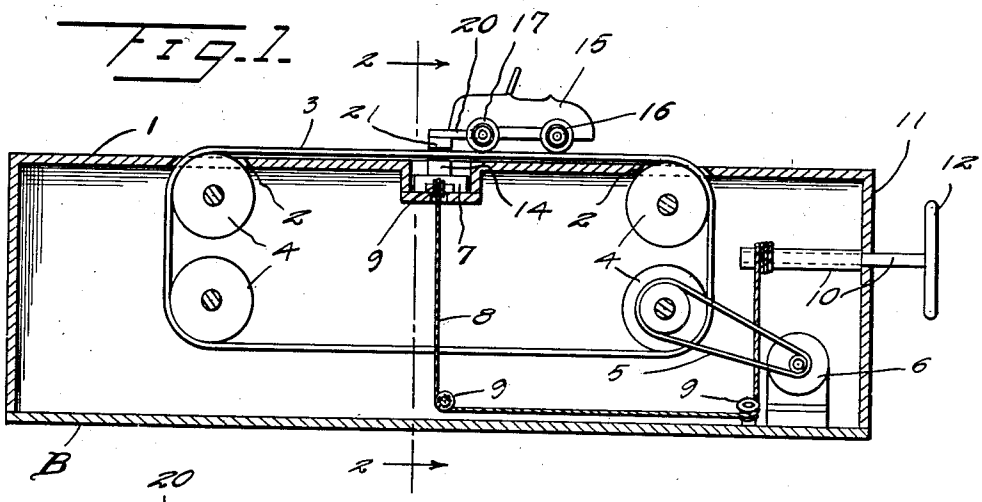



Fig. 2.

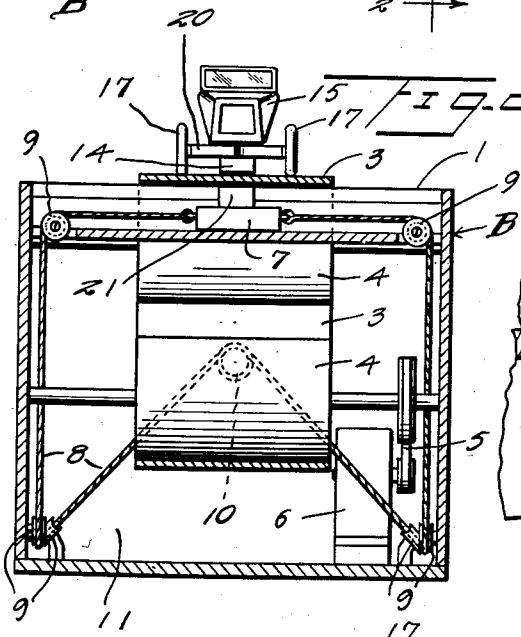



Fig. 3.

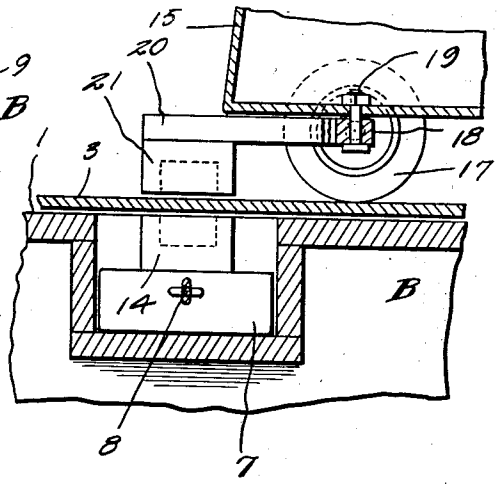
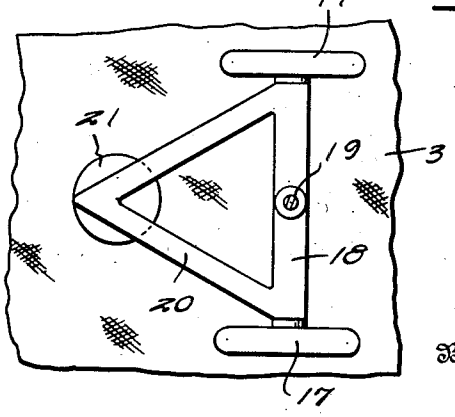



Fig. 4.




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# UNITED STATES PATENT OFFICE

2,254,967

## MECHANICAL TOY

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Application March 19, 1941, Serial No. 384,165

2 Claims. (Cl. 46—45)

This invention relates to a mechanical toy and it is an object of the invention to provide a device of this character wherein an object, such as a wheeled body may be projected over a surface together with means whereby the direction of such projection can be regulated or varied at will.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved mechanical toy whereby certain important advantages are attained, as will be hereinafter more fully set forth.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawing, wherein:

Figure 1 is a longitudinal vertical sectional view, with parts in elevation, of a mechanical toy constructed in accordance with an embodiment of my invention;

Figure 2 is a sectional view taken substantially on the line 2—2 of Figure 1;

Figure 3 is an enlarged fragmentary view, partly in section and partly in elevation, illustrating in detail the steering means as herein embodied; and

Figure 4 is a fragmentary view in top plan of the structure as illustrated in Figure 3, a portion of the body being omitted.

As disclosed in the accompanying drawing B denotes a box-like member of desired dimensions and which is provided at suitably spaced points in its top wall 1 with the transversely disposed openings 2 through which pass an endless web 3 of predetermined width. The upper stretch of this web 3 rides over the outer surface of the top wall 1 of the box B while the portions of the web 3 within the box B are operatively engaged with the guide rollers 4 suitably mounted within the box B. One of these rollers 4 is in operative engagement, as at 5, with a suitable source of power, herein disclosed as an electric motor 6. The motor 6 operates to drive the endless web 3 at a predetermined speed and the upper stretch of the web, or that portion of the web overlying the top wall 2 of the box B, constitutes what may be termed a moving roadway. Underlying the upper stretch of the web 3 but in relatively close proximity thereto is a slide 7 supported by the box B for movement transversely of the box B, or more particularly of the upper stretch of the web 3. Engaged with the opposite end portions of this slide 7 are the extremities of a flexible member 8. This member 8 is operatively engaged with the suitably positioned guide rollers 9 and has its central portion wrapped around the end portion of a shaft 10 extending within the box B through the end wall 11 of the box in advance of the web 3. Upon desired rotation of the shaft 10 the slide 7 may be readily moved or adjusted to a desired selected position transversely of the upper stretch of the web 3. The outer extremity of the shaft 10 is provided with an operating member 12 to facilitate the rotation of the shaft 10. The central portion of the slide 7 has mounted thereon at its center a magnet 14 which may be permanent or otherwise as preferred.

Co-acting with the upper stretch of the web 3 is a body 15 herein disclosed as in simulation of an automobile body, although I do not wish to be understood as limiting myself to any particular design. This body 15 is provided with the rear supporting wheels 16 and the front supporting wheels 17 which are mounted in a conventional manner upon a front steering axle 18. This axle 18 is pivotally engaged from below, as at 19, with the body 15 so that the direction of travel of the body 15 as projected from the upper stretch of the web 3 may be regulated depending upon the degree of shifting of the slide 7 in a manner to be hereinafter more fully explained.

The axle 18 has extending forwardly therefrom the converging arms 20 which are rigid with the axle 18. In the present embodiment of my invention the outer or forward end portions of the arms 20 are connected and said forward portions of the arms 20 have depending therefrom a magnet 21 which may be permanent or otherwise as preferred. With the body 15 placed upon the upper stretch of the web 3 in advance of the slide 7, as said stretch carries the body 15 toward the slide 7 the selected position of the slide will result in the magnets 14 and 21 co-acting to turn the axle 18 in a direction and to an extent depending upon the relative spacing of the magnets 14 and 21 and thereby determine the direction of travel of the body 15 as it is thrown off of the upper stretch of the web 3 upon the adjacent surface of the top 1 of the box, or such other surface as may be provided. It is believed to be obvious that the web 3 is of a material which will in no way interfere with the desired co-action between the magnets 14 and 21.

From the foregoing description it is thought to be obvious that a mechanical toy constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and operated.

I claim:

1. A device of the class described comprising in combination a movable member, a slide supported below said member for movement in a direction transverse to the direction of travel thereof, means for moving said slide, a magnet mounted on the slide, a body to be freely mounted on the movable member in advance of the slide, said body including a steering axle and a second magnet operatively supported by the axle in advance thereof, said second magnet being attracted by the first magnet as the movable member carries the body toward the slide to turn the steering axle in a direction and to an extent dependent upon the relative spacing of the two magnets in a direction transverse to the direction of travel of the movable member.

2. A device of the class described comprising in combination a movable member, a slide supported below said member for movement in a direction transverse to the direction of travel thereof, means for moving said slide, a magnet mounted on the slide, a body to be freely mounted on the movable member in advance of the slide, said body including a steering axle, a second magnet operatively supported by the axle in advance thereof, said second magnet being attracted by the first magnet as the movable member carries the body toward the slide to turn the steering axle in a direction and to an extent dependent upon the relative spacing of the two magnets in a direction transverse to the direction of travel of the movable member, the means for moving the slide comprising a flexible member secured to the opposite ends of the slide, a shaft about which the intermediate portion of the flexible member winds and means for guiding the flexible member to assure movement of the slide transversely of the direction of travel of the movable member.

JOHN S. LARKINS, JR.