Feb. 18, 1941. M. KIEFER 2,232,244

TOY

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Fig. 1

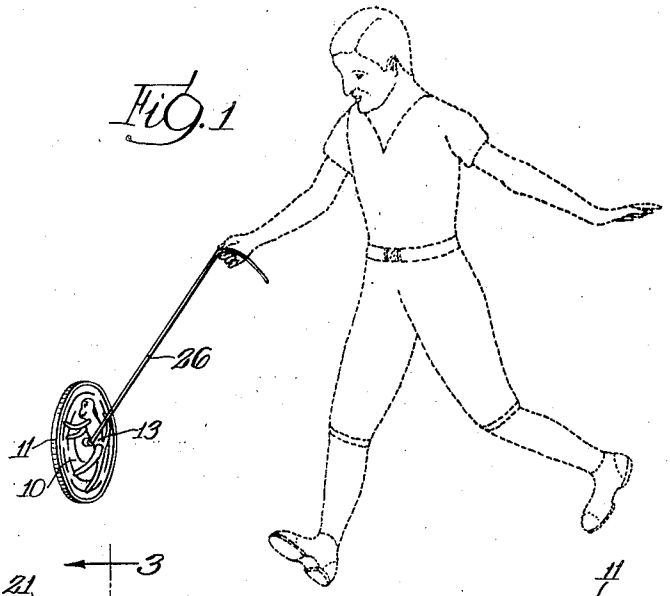


Fig. 2.

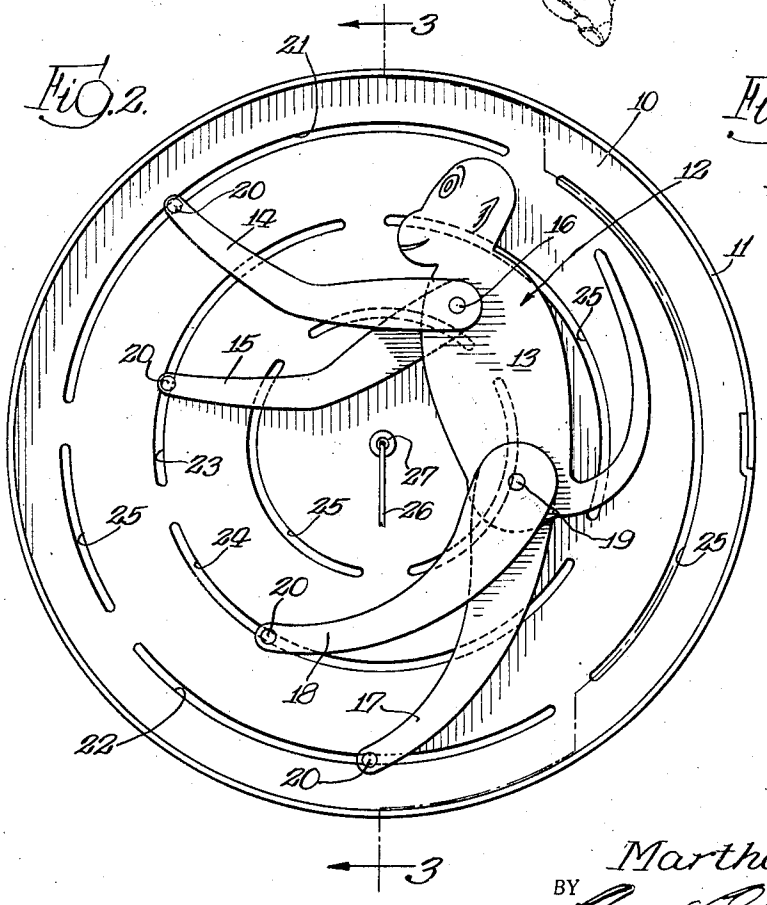
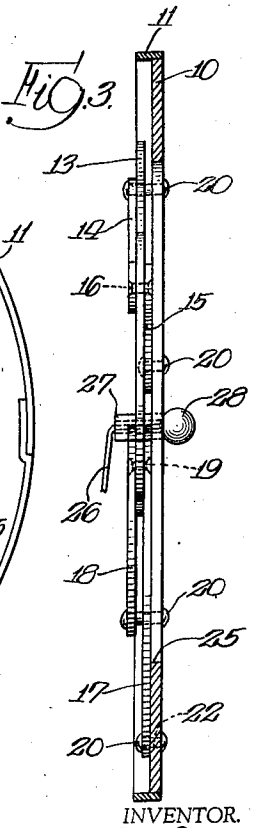


Fig. 3.



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Fig. 4.

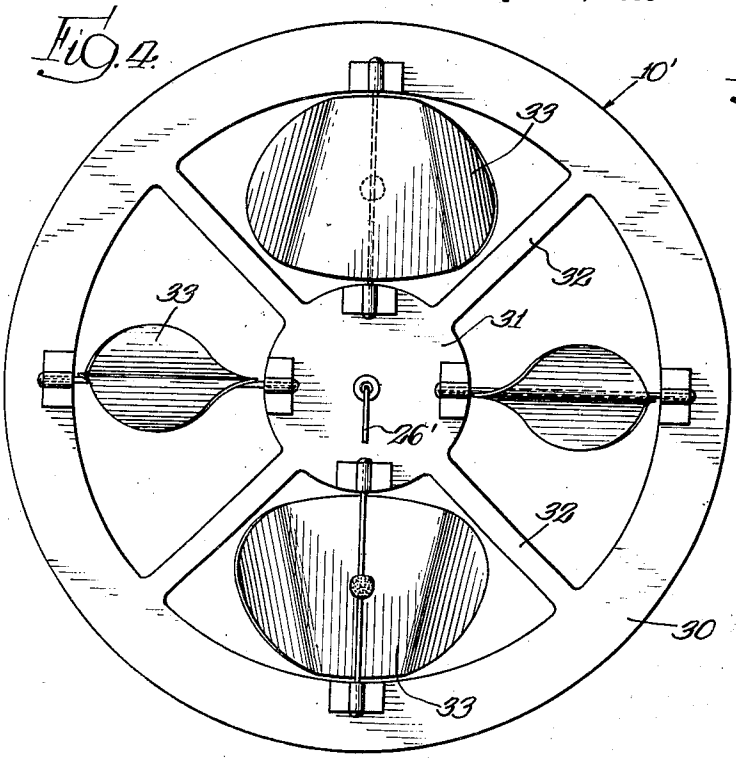


Fig. 5.

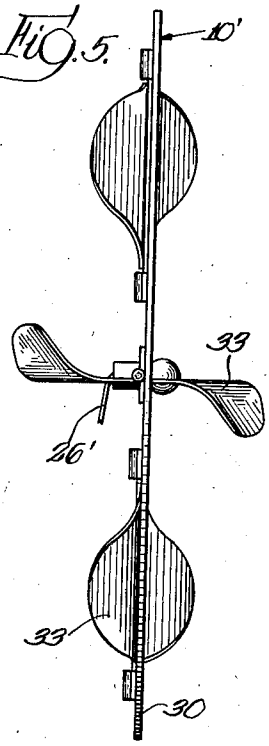


Fig. 6.

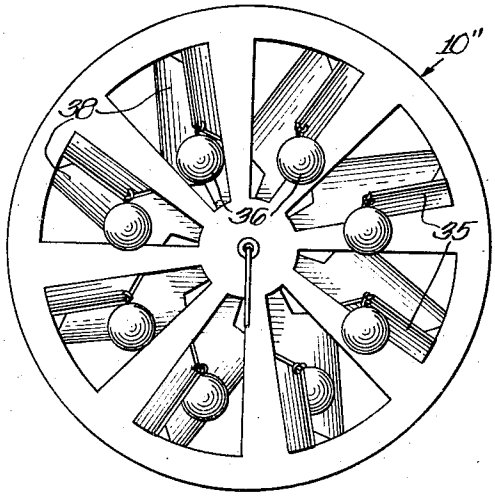
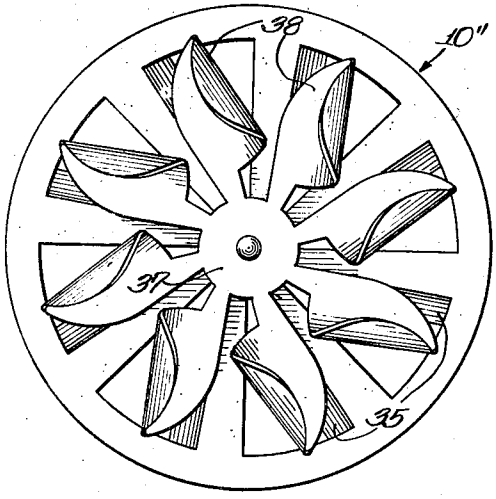


Fig. 7.



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UNITED STATES PATENT OFFICE

2,232,244

TOY

Martha Kiefer, Chicago, Ill.

Application September 22, 1938, Serial No. 231,217

4 Claims. (Cl. 46—220)

The invention relates generally to toys and more particularly to mechanical, child operated toys.

A general object of the invention is to perfect a toy of new and improved construction.

A more particular object of the invention is to perfect a toy, the proper operation of which requires the child playing with the same to run and thus induce the child to partake of the exercise necessary for the building of a strong and healthy body.

Another object is to provide a toy, the proper operation of which requires the exercise of a certain degree of skill on the part of the child, thus providing a test and an incentive for the operation of the toy.

Yet another object is to provide a toy of new and improved construction having parts which are actuated during operation of the toy, thereby to attract and hold the attention and interest of a child.

Still another object is to provide a toy including a part simulating an animal or the like which is given an animated movement during operation of the toy.

Other objects and advantages will become apparent from the following detailed description taken in connection with the accompanying drawings, in which:

Fig. 1 is a perspective view of a toy embodying the features of the invention with the toy shown being operated.

Fig. 2 is an enlarged side elevational view of the toy shown in Fig. 1.

Fig. 3 is a sectional view taken approximately along the line 3—3 of Fig. 2.

Fig. 4 is a side elevational view of a modified form of toy.

Fig. 5 is an edge elevational view of the toy shown in Fig. 4.

Fig. 6 is an elevational view of one side of still another modified form of toy.

Fig. 7 is an elevational view of the opposite side of the toy shown in Fig. 6.

While the invention is susceptible of various modifications and alternative constructions, it is shown in the drawings and will hereinafter be described in detail as embodied in a preferred form and two modifications, but it is not intended that the invention is to be limited thereby to the specific constructions disclosed, but it is intended to cover all modifications and alternative constructions falling within the spirit and scope of the invention as defined by the appended claims.

Broadly, a toy embodying the features of this invention comprises generally a circular element which is intended to be rolled on the floor or the sidewalk by the child playing with the toy and means for guiding and impelling the circular element. This element is so constructed as to be incapable of remaining upright when at rest and the guiding means, moreover, also is incapable of supporting the circular element in upright position. The circular element will, however, roll in upright position when it has a certain rotative speed, thereby compelling the child playing with the toy to run and thus obtain the exercise so necessary for the building of a strong and healthy body. The interest of the child in operation of the toy is aroused and maintained in that a certain degree of skill is required in the operation of the toy and by the provision of animated or movable parts which are actuated during the operation of the toy.

Referring now more particularly to the preferred form of the invention disclosed in Figs. 1 to 3, the toy comprises a circular disk 10 which may be formed of any suitable material but preferably is made of metal. This disk has secured to it or formed integral with it a rim 11 which is so narrow as to be incapable of supporting the disk in upright position when the disk is at rest. Carried by the disk is a movable part generally designated 12 which herein is formed in simulation of a monkey and is movably mounted on the disk so that it may be given an animated movement as an incident to rotation of the disk. Accordingly, the part 12 has a portion 13 shaped to represent the head and body of a monkey, an arm 14 and an arm 15 pivotally mounted at 16 to the body portion 13, and legs 17 and 18 pivotally mounted at 19 to the body portion 13. The body portion 13, while herein shown flat, may, to heighten the illusion, be cast so as to give substantial thickness to it, but in either event should be constructed of some heavy material so as to give to the part a certain amount of weight. Each of the arms and legs carries at its free end a laterally extending pin 20 adapted to project slidably through arcuate slots formed in the disk 10. Accordingly, an arcuate slot 21 is provided for the pin of the arm 14, a slot 22 of like radius is provided for the pin of leg 17, and slots 23 and 24 of like radius are provided for the pins of arm 15 and leg 18, respectively. It is to be understood, of course, that the slots 21 to 24 have

been located and proportioned with respect to the length and position of the arms and legs of the monkey and their point of attachment to the body portion 13. When thus properly proportioned and located, the monkey will assume various positions as the disk is rotated, thus giving the effect of a monkey doing tricks. Preferably, additional arcuate slots 25 are formed in the disk 10 which, with the slots 21 to 24, are intended to represent bars and thus give the impression that the monkey is within a cage.

As previously stated, a guiding and actuating means is provided for the disk 10 which, however, is incapable of supporting the disk in upright position when the disk is at rest. Such a guiding means may be formed of any flexible material and herein comprises simply a string or cord 26. This string at one end is secured to the center of the disk 10 and preferably is secured by passing the same loosely through a hub 27 and securing a ball 28 or the like to the end thereof to prevent its being drawn through the hub 27. The other end of the string 26 is intended to be held in the hand of the child operating the toy, as shown in Fig. 1. Preferably the hub 27 projects laterally from the disk 10 a distance sufficient so that it lies in the path of the body portion 13 serving as an abutment limiting the movement of the body portion 13 in that particular direction.

To operate the toy, the child grasps the disk in one hand and the end of the string 26 in the other hand, then places the disk in upright position and gives the same an initial rotative movement. After such initial movement has started the toy rolling in upright position, the toy may be caused to continue to roll in upright position by keeping the string 26 taut and with the free end slightly in advance of the toy.

It is believed apparent from the foregoing that the child through the string 26 merely supplies the force necessary to keep the toy rolling and that the toy remains in upright position as an incident to its rotation and is not supported by the string 26. It is essential, therefore, that the child run with the toy in order that a sufficient rotative speed may be maintained to retain the toy in upright position, thus assuring that the child will receive exercise in playing with the toy. While a certain degree of skill is required in the operation of the toy which serves as an inducement for older children to play with the toy and to hold their interest, the amount of skill required is so slight that the toy is readily operated by comparatively young children. Children also are interested and greatly attracted by moving parts, and even more so by parts which are constructed to resemble animals or the like, and are then animated to have the movements or actions characteristic of the animal represented. Thus the children will be induced to operate the toy in order that they may observe the antics which the representation of the monkey embodied herein goes through as the toy rolls along. With the string 26 threaded through the toy so that the monkey is on the side exposed to the child and, since the toy always remains with that same side toward the child, the child may readily observe the action of the monkey as the child runs with the toy.

Referring now more particularly to the modified form of the invention shown in Figs. 4 and 5, the toy disclosed therein embodies the same principles as that disclosed in Figs. 1 to 3, in fact it differs therefrom only in the details of construction and the character of the movable parts. Accordingly, the toy comprises a circular disk 10' cut out to form a rim 30 and a hub 31 connected by spokes 32. In the present instance, the disk is formed with four such cut out portions of uniform size so as to make the disk symmetrical. Rotatably journaled on radial axes in each of the cut out spaces between the spokes 32 is a propeller or blade 33 so shaped that rotation will be imparted thereto as an incident to rotation of the disk 10'. These blades or propellers 33 are preferably variously colored so that in the operation of the toy a constantly changing color or rainbow effect will be produced. The toy is provided with a flexible string or cord 26' for actuating the toy the same as in the construction disclosed in Figs. 1 to 3.

Referring now more particularly to the form of the invention disclosed in Figs. 6 and 7, this form of the invention also embodies the same principles as that disclosed in Figs. 1 to 3, again differing therefrom in the character of the movable parts mounted on the disk. Accordingly, the toy comprises a circular disk 10'' which in the present instance has a plurality of fins 35 bent to project laterally of the disk. Secured to each of the fins 35 is a bell 36. Rotatably mounted on the disk on the side opposite the fins 35 is a wheel 37 having radially projecting blades 38. These blades are curved as clearly seen in Fig. 7 so that one face of the blade forms a trough tending to catch air currents while the other face forms a rounded surface offering substantially less resistance to the passage of air currents thereover. As a result, when subjected to air currents, rotation will be imparted to the wheel 37. When the toy is rolled in one direction, for example, to the left as viewed in Fig. 7, the wheel 37 will have a counter-direction of rotation, and if the disk 10'' and the wheel 37 are variously colored, as preferably they are, this counter-rotation of the wheel 37 will produce an interesting effect arresting and holding the interest and attention of the child. When the toy is rotated in the opposite direction, for example, to the right, as viewed in Fig. 7, while the reaction of the air currents would then cause the wheel 37 to rotate in the same direction as the disk 10'', nevertheless that rotation would be at a different speed to the rotation of the disk 10'' and thus there would still be relative movement between the disk and the wheel, again producing an interesting effect.

It is believed apparent from the foregoing that I have perfected a toy which not only will amuse children, but which at the same time will produce beneficial and healthful exercise on the part of the child which would not be obtained and is not obtained with toys of like character having a rigid handle capable of supporting the disk in upright position even when at rest. I have found that toys that can be pushed along at the end of a rigid handle do not induce running on the part of the child and, moreover soon fail to hold the interest of the child. With my toy, however, the child must run in order to operate the toy properly, which in and of itself retains the interest of the child in the toy. Moreover, that interest is further induced and retained because a certain amount of skill is required in the operation of the toy and because the operation of the toy results in interesting movements and changes of parts.

I claim as my invention:

1. A toy comprising, in combination, a circular disk adapted to be rolled along the ground or the

like, said disk being incapable of supporting itself in upright position when resting on its periphery but operable to remain in upright position so long as it is running at a predetermined rate, individual elements constructed in simulation of the parts of a character movably connected and movably mounted on said disk and supported solely thereby, the character so simulated being animated as an incident to rotation of said disk, and a flexible cord secured to the center of said disk for guiding said disk and for imparting thereto the force necessary to maintain rotation of the disk.

2. A toy comprising, in combination, a circular disk adapted to be rolled along the ground or the like, said disk being incapable of supporting itself in upright position when resting on its periphery but operable to remain in upright position so long as it is running at a predetermined rate, parts constructed in simulation of an animal movably connected and mounted on said disk for movement in a plane parallel to the plane of the disk, the animal so simulated being animated as an incident to rotation of said disk, and a flexible cord secured to the center of said disk and free of the parts mounted thereon for guiding said disk and for imparting thereto the force necessary to maintain rotation of the disk.

3. A toy comprising a circular disk, said disk being generally incapable of remaining in upright position on its periphery when at rest but tending to roll in upright position on its periphery when rotating at or above a predetermined speed, a plurality of parts shaped to simulate an animal movably mounted on said disk including the legs of such an animal, a plurality of arcuate slots formed in said disk, means carried by the ends of the parts resembling the legs received in said slots to be guided thereby, said parts during rotation of said disk assuming different positions to give an animated movement to the parts as an incident to rotation of the disk, and a flexible guide means connected to said disk for guiding said disk and for imparting thereto the necessary rotative speed for sustaining said disk in upright position.

4. A toy comprising a circular disk, said disk being generally incapable of remaining in upright position on its periphery when at rest but tending to roll in upright position on its periphery when rotating at or about a predetermined speed, a plurality of parts shaped to simulate a monkey movably mounted on said disk including the legs of such a monkey, a plurality of arcuate slots of varying radius formed in said disk to simulate the bars of a cage, means carried by the ends of the parts resembling the legs of the monkey received slidably in said slots to be guided thereby, said parts during rotation of said disk assuming different positions including an inverted position of the monkey to give an animated movement to the parts as an incident to rotation of the disk, and a flexible guide means connected to said disk for guiding said disk and for imparting thereto the necessary rotative speed for sustaining said disk in upright position.

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