Oct. 18, 1949. K. PACLAYAN 2,485,064

NOW BY JUDICIAL CHANGE OF NAME
K. PACLAN

TOY

Filed May 9, 1947

FIG. 1

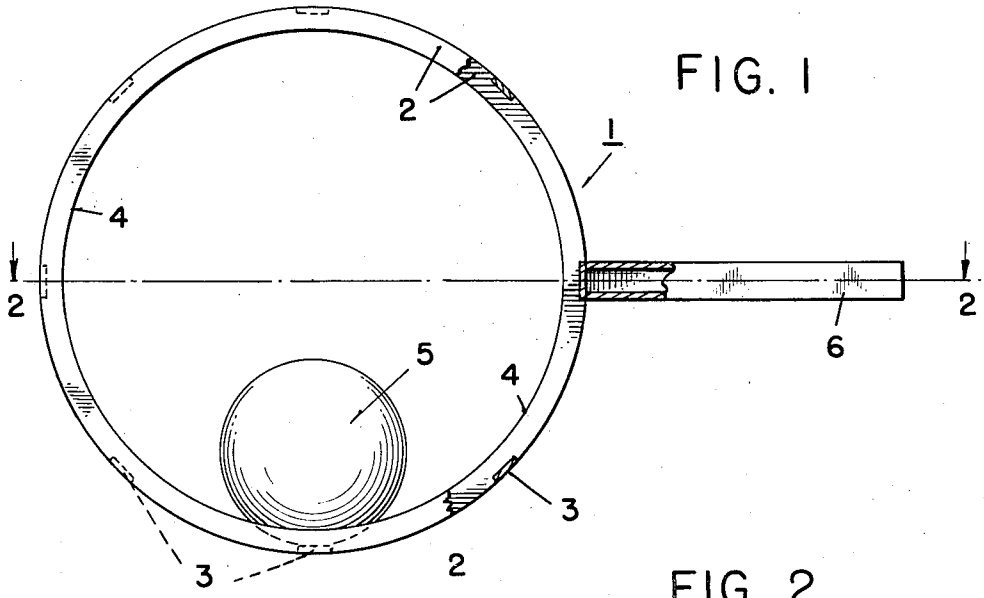


FIG. 2

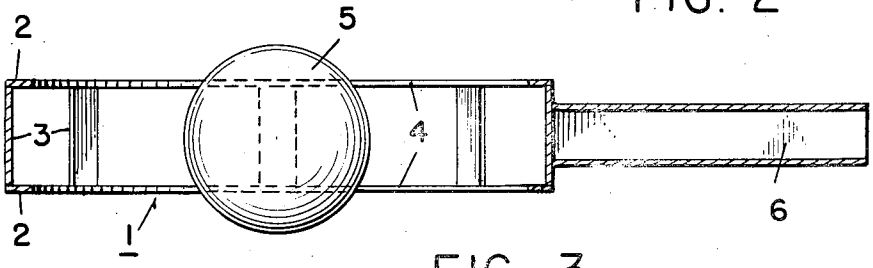
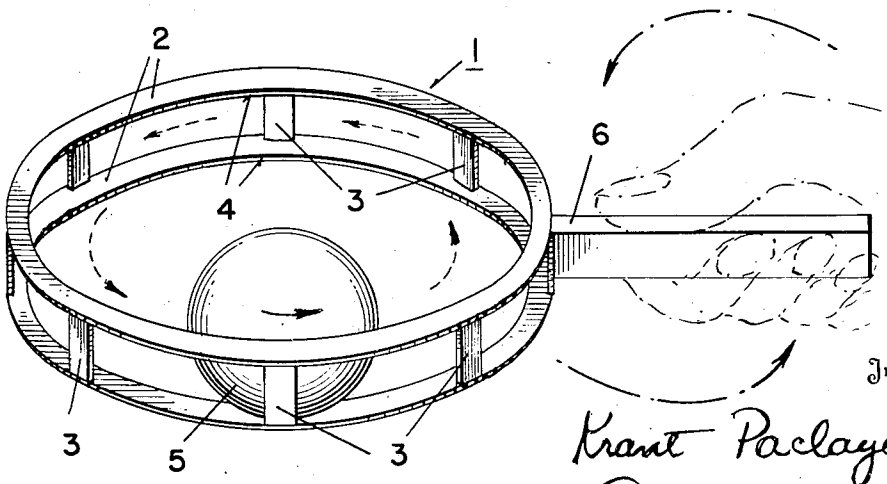


FIG. 3



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1 Claim. (Cl. 46—47)

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The present invention relates to toys, and more particularly it provides a simple and inexpensive structure by which a ball is manually put into motion, and kept in motion, around an endless track or raceway, by manipulation requiring only a very moderate amount of skill.

The toy is thus well adapted to appeal to relatively small children, since it is easily put into successful operation without the necessity for lengthy practice or the acquisition of any great amount of natural or acquired skill.

The toy is susceptible of embodiment in attractive form at low cost of manufacture and can be made rugged and durable so as to last through a long life of ordinary use and even considerable abuse.

The structure is useful also in demonstrating the action of centrifugal force, since it is that phenomenon by which the ball is kept in movement confined to its track or raceway.

Generally speaking, the invention comprises a bottomless and topless member forming an internal, closed, substantially circular track or raceway, provided with a radially outstanding handle by which the member may be given a gyratory motion which will cause a ball to travel around the track with sufficient rapidity to be held by centrifugal motion in place on the track.

A preferred form of embodiment of the invention which has been actually made and thoroughly tested and found to give entirely satisfactory results in actual use is depicted on the accompanying drawing, in which

Figure 1 is a top plan view, with certain of the parts broken away to show their internal structure.

Fig. 2 is a section taken diametrically and axially through the member which forms the track and lengthwise through the handle, on the line 2—2 of Fig. 1; and

Fig. 3 is a perspective view showing the manner in which the device is used.

In these figures, the reference numeral 1 designates generally a track-forming member which in the illustrated instance comprises a pair of flat annular plates 2, 2, conveniently made of clear or colored plastic, in any appropriate size. Practical dimensions and proportions comprise an internal diameter of eight inches, a width of three-eighths inch, and a thickness of one-sixteenth inch. Of course these measurements are suggestive and exemplary merely, and are subject to wide variation, to make a larger or smaller toy.

The two plates are connected together in axially superposed concentric relationship by a plurality of posts 3, which may conveniently be made of the same material as the plates, and which are cemented, welded, or otherwise secured to the plates at their outer peripheries, so as to mount the plates at a convenient fixed separation, such as one and one-half inches apart.

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The length of the posts 3 is selected with relation to the width of the plates 2 so that the inner peripheral edges 4 of the two plates will make two-point contact with a ball 5 which is of such size as to be kept from contact with the posts as the ball travels around the track or raceway provided by the edges 4.

A handle 6, which may be fabricated from the same kind of plastic material that is used for the plates and posts, may be secured by cementing, welding or otherwise, to one of the posts so that the handle projects radially outwardly from the member 1 to provide means for holding the entire assembly in the hand of an operator, as indicated in Fig. 3.

With the device thus held, the handle is manipulated to give the member 1 a gyratory motion, as is intended to be suggested by the long arrows in Fig. 3. If the ball 5 is positioned within the member 1, engaged with the internal track thereof, the gyratory motion will cause the ball to travel around the track, and this movement can easily be made to assume sufficient rapidity to keep the ball engaged by centrifugal force securely against the edges 4. The movement of the ball can be started with the ball and the member 1 resting on some horizontal surface, like that of a table. When the ball is rotating at sufficient speed, the device can be lifted from the table and, while the gyratory motion is maintained, the ball will continue to travel in its circular path, being confined therein regardless of any change in the plane in which the member 1 is gyrated.

The ball can be started in movement by holding the member 1 in a vertical plane, with the ball resting by gravity in the lower part of the now upright track. The handle can be manipulated to rock the member 1 back and forth until the ball mounts up one side or the other of the track and passes the zenith of the track and descends on the other side. Continued gyratory manipulation will cause the ball to rise rapidly up the opposite side of the track and continue its movement around the circular path.

An interesting embellishment may be added to the toy by enclosing a hard pellet or group of pellets in the ball, which is otherwise hollow.

The ball is thus caused to produce a rattling sound as it travels around the track, but this rattling sound can be silenced by so regulating the speed of the ball that the pellet or group of pellets will remain relatively fixed in position inside the ball. This provides an interesting variation in the use of the device, since somewhat more skill is required to cause the ball to rotate silently than to cause it to travel noisily.

In this latter form of the invention, in order to make the rattling loud, the ball is best made of thin, hard plastic. Such material is preferred for the ball in any case, even when pellets are not enclosed within it, to keep the ball undistorted by centrifugal or other force as it rolls at high speed around its track and to keep it well engaged with the rails forming the track, out of bumping contact with the posts 3.

It is to be understood that the specification of materials and sizes hereinabove given is merely suggestive. The invention may be incorporated in other forms and by the use of other materials, although I prefer the form and material herein suggested. Modifications within the scope of the appended claim are to be deemed within the scope and purview of the principles of the invention.

I claim:

A toy comprising the combination of a pair of annular plates made of sheet plastic material, a

series of posts consisting of relatively narrow straight strips of said sheet plastic material cemented in peripherally spaced relation to said annular plates at their outer peripheries to connect them in axially spaced concentric relation so that the inner peripheries of the plates form circular rail edges cooperating to provide a closed circular track, said series of posts comprising the sole means connecting the plates to each other, and a handle projecting radially outwardly from one of the posts, whereby a ball having a diameter appreciably greater than the distance separating the plates is adapted to travel around the track by riding on the rail edges without contacting the posts and be held on the rail edges by centrifugal force when the handle is manipulated to give the track a gyratory motion.

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