Oct. 31, 1933. B. W. SMITH 1,932,943

TWIN BALL TOY

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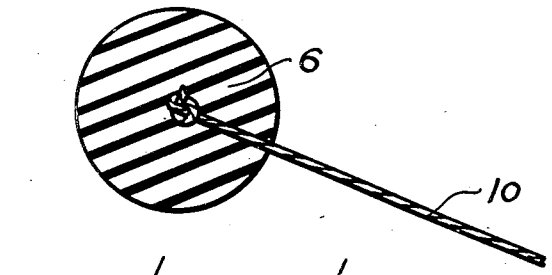


Fig. 2

Fig. 1

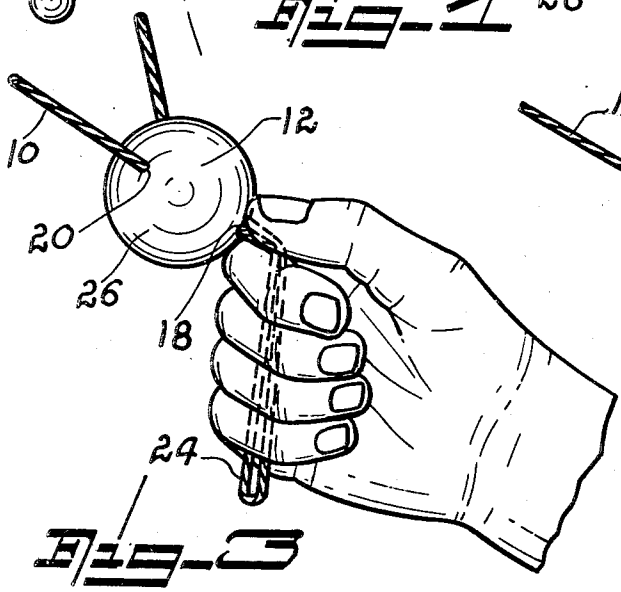


Fig. 3

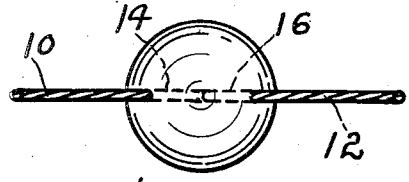


Fig. 5

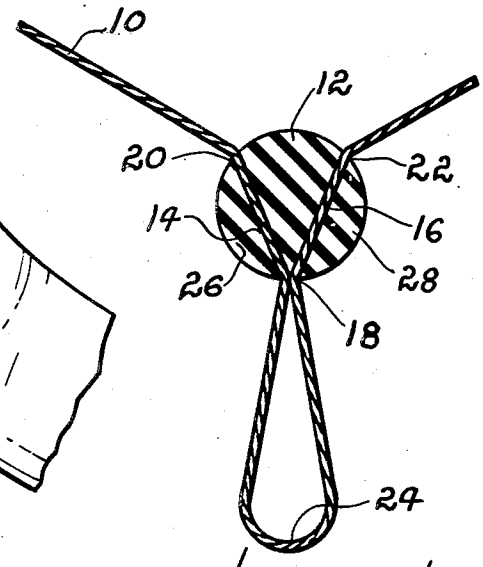


Fig. 4

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TWIN BALL TOY

Byron W. Smith, Seattle, Wash.

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1 Claim. (Cl. 46—37)

My present invention relates to the art of toy making and more particularly to a twin ball toy.

In my present device I have provided a toy which consists of two captive balls joined by a single cord and controlled by a handle more or less centrally disposed upon said cord. I have found that in my present arrangement I can produce a toy capable of a great number of variations of action. It is a toy which requires considerable skill to operate in its various possible convolutions. A person well skilled with this toy can operate the same by grasping the cord substantially midway between the two balls. However, for children particularly, it is very desirable to provide every aid to enable them to get the greatest number of variations of movement.

Therefore the principal object of my invention is to provide a twin ball toy which is provided with a line securing means adjustably disposed along the length of the connecting cord.

A further object of my invention is to provide a handle for use which my connected ball toy which will securely engage the connecting string and hold it in any desired adjustment yet one which will permit of very quick adjustment while the toy is in use.

A further object of my invention is to provide an operating handle which will space the two ends of the connecting cord somewhat apart at the handle so as to permit more easily manipulation of the device.

Other and more specific objects will be apparent from the following description taken in connection with the accompanying drawing, wherein

Figure 1 is a perspective view showing my device in use.

Figure 2 is a cross-sectional view of one of the balls forming my device, showing one means of securing the ball to the string.

Figure 3 shows an alternate manner of holding my device while in operation.

Figure 4 is a cross sectional view through the operating handle or line securing means.

Figure 5 is a face view shown facing the two ends of the connecting string as they emerge from the operating handle.

Referring to the drawing, throughout which like reference characters indicate like parts, 6 and 8 designate the two spaced revolving balls of my device. These may be formed of any suitable material such as wood, bakelite, rubber and the like. I have found, however, that for use of children particularly, the softer rubber such as sponge rubber is probably the most desirable in that it is less apt to cause injury to the users and also is less apt to mar furniture or break windows and the like. Disposed between the two balls in a manner to connect the same is the single length of string 10. Now it has been found desirable to normally have one portion of the string of greater length than the other so that the two balls as they revolve in circles will revolve in circles of slightly different diameters. To this end I have found it desirable to employ some securing means within the operating handle 12. This I have found can be most easily accomplished by passing cord 10 thru ball 12 and having it looped back on itself as illustrated in Figures 3 and 4. In this way it is possible to have the two string carrying holes 14 and 16 converge until they meet as at 18 and to be widely spaced on the opposite side of the ball. This serves a dual function. First it provides that at the point of exit as at 20 and 22 the rubber is comparatively thin over the holes so that pressure can easily be applied to the cord by the fingers of the operator's hand and thus tend to pinch inwardly the rubber so as to more securely engage the cord in its desired adjustment. This is a particularly desirable arrangement if it is desired to change the length of the two parts of the connecting cord while the device is in operation. When the experienced operator wishes to change the length of the two ends of the cord it can be easily accomplished by forming a loop of the cord as at 24 which will just pass down thru ball 12 sufficiently so that it can be looped around the little finger. It is then possible to take up slack on one of the cord ends and have the centrifugal force exerted by the revolving ball take up the slack thus gathered in by the operator's hand and lengthen the opposite end.

It is particularly desirable to space the exit points 20 and 22 as far apart as can be conveniently arranged, as this makes it easier for the unskilled operator to get the balls swinging in two different planes or directions. This produces some rather novel effects. This same spacing of points 20 and 22 creates in effect a wedge shaped engaging means disposed between 18, 20 and 22 which when the cheek pieces as 26 and 28 are pressed tend to hold the string very securely.

Method of operation

Probably the most convenient method of starting my toy in operation is to grasp the handle 12 in one hand and hold one of the balls in the other then start the free ball swinging in a circle and after the one ball has started to then start the other in the desired direction. By moving the

hand holding the handle straight up and down the balls may be rotated in the opposite directions from that in which they originally started. They may be swung in the same plane or in planes cutting each other. Many novel starting movements can be worked out as the user becomes more experienced. For instance the toy may be started by a skilled operator by laying the toy down at full length and giving the handle a big swing straight up or by merely jerking downwardly as the balls hang from the handle providing they are separated a short distance. Continued motion is maintained in the balls by imparting a slight movement in the general direction of rotation. The exact motion can best be understood by revolving a single ball string and it will soon be found that a very small movement of the hand will be sufficient to keep the balls in proper rotation. Now when the two balls are revolving in opposite directions it becomes necessary to have the two centers of revolution spaced somewhat apart as is provided in my handle 12 so that the operator can, by twisting the handle, actually impart the necessary movement to both of the revolving balls but impart it in the opposite sense which of course would be required if the balls rotate in the opposite directions.

The foregoing description and the accompanying drawing are believed to clearly disclose a preferred embodiment of my invention but it will be understood that this disclosure is merely illustrative and that such changes in the invention may be made as are fairly within the scope and spirit of the following claim.

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

In a toy, the combination with a single cord having a ball at each end, of a slidable anchor having converging holes therethrough enclosing two portions of the cord, said anchor composed of resilient compressible material whereby the anchor is clamped on said portions of the cord, and said cord formed with a loop-handle extended from the converging point of the two enclosed portions of the cord.

BYRON W. SMITH.