Feb. 15, 1966 F. E. BRIDGES 3,234,684

DISC AMUSEMENT DEVICE WITH CORD-RECEIVING OPENINGS AND REMOVABLE RIM

Filed Feb. 11, 1963

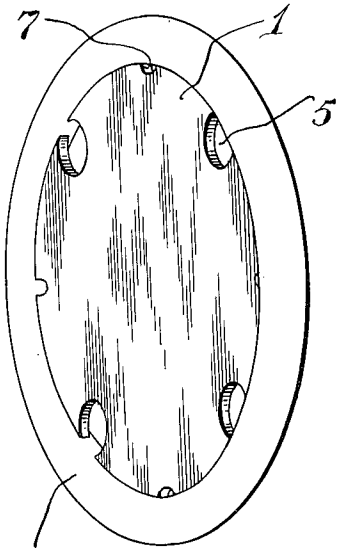


Fig. 1

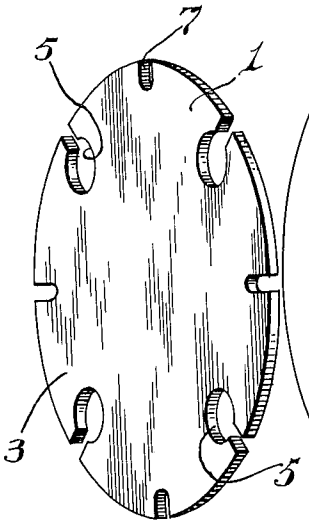


Fig. 2

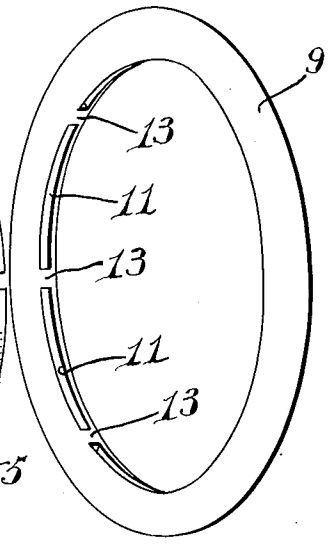


Fig. 3

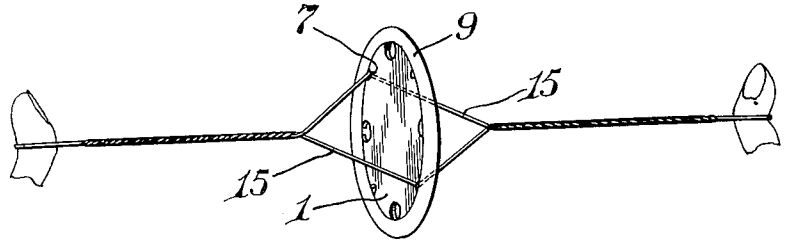


Fig. 4

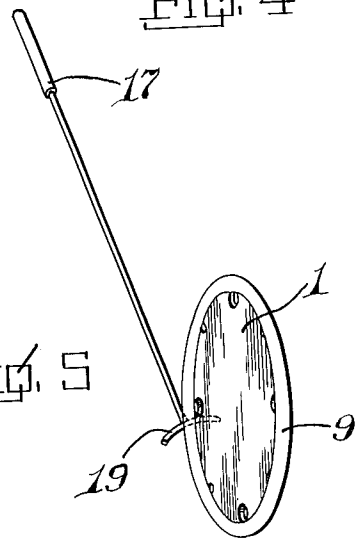


Fig. 5

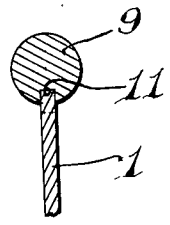


Fig. 6

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DISC AMUSEMENT DEVICE WITH CORD-RECEIVING OPENINGS AND REMOVABLE RIM

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The present invention relates to amusement devices, more particularly of the type embodied in a rotatable disc. Such rotatable-disc amusement devices have utility in a number of environments, and will be illustrated by way of example in connection with two such environments, namely, spinning disc toys and rolling hoop toys.

It is an object of the present invention to provide an amusement devices the parts of which are locked against movement relative to each other.

Another object of the present invention is to provide a spinning toy including a filament that can be readily changed when worn or broken.

Still another object of the present invention is the provision of a hoop toy having a novel mode of operation.

Finally, it is an object of the present invention to provide an amusement device which is relatively simple and inexpensive to manufacture and assemble, easy and amusing to operate and repair, and rugged and durable in use.

Other objects and advantages of the present invention will become apparent from a consideration of the following description, taken in connection with the accompanying drawing, in which:

FIGURE 1 is a perspective view of an amusement device according to the present invention;

FIGURE 2 is a view similar to FIGURE 1 but showing the inner sheet of the amusement device;

FIGURE 3 is a view similar to FIGURES 1 and 2 but showing the rim of the amusement device;

FIGURE 4 is a perspective view of the amusement device of this invention incorporated in the environment of a spinning toy;

FIGURE 5 is a view similar to FIGURE 4 but showing the amusement device in the environment of a rollable hoop; and

FIGURE 6 is an enlarged fragmentary cross-sectional view of a peripheral portion of the amusement device of the present invention.

Referring now to the drawing in greater detail, there is shown an amusement device embodying the present invention, in the form of a circular disc **1** in the central portion of which is comprised of a circular flat sheet **3** of uniform thickness. Sheet **3** has a plurality of notches **5** and **7** in spaced relationship about its periphery. Notches **5** are relatively large notches, while notches **7** are relatively small notches. Notches **5** are disposed in diametrically opposed pairs on opposite sides of sheet **3**, as are also notches **7**.

Disc **1** also includes a circular rim **9** which in the illustrated embodiment is a ring of circular cross-sectional configuration. On its radially inner side, rim **9** is provided with a recess **11** extending entirely thereabout. Projections or keys **13** are disposed at spaced locations within recess **11**, however, so that recess **11** is not continuous entirely about the inner periphery of rim **9**.

Sheet **3** is preferably of relatively rigid material and may be hard fiberboard, wood, metal, rigid plastic, or the like. Rim **9**, on the other hand, is preferably an elastic deformable material such as rubber or polyvinyl chloride or the like. To assemble rim **9** on sheet **3**, therefore, it is necessary only to insert one portion of the edge of sheet **3** into recess **11** of rim **9** with a notch **5** or **7** in registry with a projection or key **13** so that the key **13** will be disposed in the notch. The remainder

of rim **9** can then be stretched and snapped over the rest of the periphery of sheet **3** and the projections or keys **13**, which are disposed at the same peripheral spacing as notches **5** and **7**, will each fall in an associated notch **5** or **7**.

In assembled relationship, therefore, disc **1** is characterized by the marginal edges of sheet **3** being encompassed on both sides by the material of rim **9**. Recess **11**, however, is not as deep as any notch **5** or **7**, so that the closing of the outer ends of notches **5** and **7** by rim **9** and more particularly projections or keys **13** thereon will leave openings through disc **1** which are comprised by the inner ends of notches **5** and **7**. The openings provided by the inner ends of notches **5** are of course substantially larger than the openings provided by the inner ends of notches **7**. Similarly, rim **9** may be unsnapped from sheet **3** and removed by an action which is the reverse of the assembly procedure.

Disc **1** as shown in FIGURE 1 has considerable amusement value by itself. It may be rolled or it may be spun or it may be thrown, and at sufficiently high speed of rotation will make a noise by virtue of the presence of the holes provided by the inner ends of notches **5** and **7**. These same holes provide finger grips and the like for spinning or rotating disc **1**. At the same time, however, it should be borne in mind that by virtue of projections or keys **13** in the outer ends of notches **5** and **7**, sheet **3** and rim **9** will not have rotation relative to each other, and this phenomenon is a further source of amusement when playing with disc **1**.

Although disc **1** has amusement value by itself, it is preferred that it be used in connection with other simple equipment or accessories. One such further use for disc **1** is shown in FIGURE 4, in which disc **1** is embodied in the form of a spinner toy. A filament **15** passes through each of a pair of diametrically opposed notches **5** or **7**, preferably notches **7**, and is in the form of a continuous closed loop. Filament **15** may for example be string or a rubber band or the like. When disc **1** is rotated and winds up filament **15** in opposite directions on opposite sides of disc **1**, then a pull in opposite directions, as shown in FIGURE 4, will spin disc **1** quite rapidly, and the momentum of the spinning disc will cause filament **15** not only to straighten out but also to wind up in the opposite direction, so that periodic pulls on filament **15** in opposite directions will cause disc **1** to spin rapidly and alternately in opposite directions. Should filament **15** become broken or worn, then rim **9** can be unsnapped from sheet **3**, a new filament **15** inserted in a diametrically opposed pair of notches **7**, and rim **9** replaced, after which the toy is ready for use again.

Another environment in which disc **1** may be used is a hoop toy which is rollable along the ground for amusement purposes. As is shown in FIGURE 5, an elongated handle **17** is a portion of this embodiment of the amusement device, handle **17** having at its lower end at least one laterally extending portion **19**, and preferably a pair of laterally extending portions **19** extending in opposite directions from each other. Portion **19** is of a size that can be readily fitted into the inner ends of notches **5** when rim **9** is in place, thereby to propel disc **1** in a manner of a hoop.

In operation, the hoop embodiment of FIGURE 5 of the drawing is characterized in that the initial momentum is imparted to the hoop by inserting laterally extending portion **19** on handle **17** into one of the relatively large openings provided by large notches **5** and giving the hoop a shove with the handle. When the hoop has been started rolling in that manner, then handle **17** and its laterally extending portion **19** may be removed from the openings provided by notches **5** and thereafter used in the manner

of FIGURE 5, that is, as a pusher for keeping the hoop in motion.

The versatility of dic **1** will therefore be seen, in that different size notches **5** and **7** are provided so as to facilitate the playing of a variety of games. At the same time, however, the speed and ease of assembly and disassembly of the amusement device of the present invention make it quite easy to assemble and disassemble the device and to keep the device clean. The formation of sheet **3** as a flat sheet makes it easy to imprint sheet **3** with designs or with advertising, and the cheap and simple construction and assembly of the device makes it ideal as an advertising give-away item. The elastic deformable nature of rim **9** makes the device quite safe for even the youngest children to play with. Rim **9** also protects the edges of sheet **3** from harm and spaces the flat faces of sheet **3** above any flat supporting surface, so that designs or advertising material on the flat sides of sheet **3** do not rub off.

From a consideration of the foregoing disclosure, therefore, it will be evident that all of the initially recited objects of the present invention have been achived.

Although the present invention has been described and illustrated in connection with preferred embodiments, it is to be understood that modifications and variations may be resorted to without departing from the spirit of the invention, as those skilled in this art will readily understand. Such modifications and variations are considered to be within the purview and scope of the present invention as defined by the appended claims.

What is claimed is:

1. An amusement device comprising a flat sheet having a plurality of slots opening through its periphery, and a removable rim encompassing the periphery of the sheet and closing the outer but not the inner ends of the slots.

2. An amusement device as claimed in claim **1**, the rim being of an elastic deformable material and being resiliently detachably mounted on the sheet.

3. An amusement device as claimed in claim **1**, the sheet and the rim being circular.

4. An amusement device as claimed in claim **3**, the rim having projections thereon that extend into the outer ends of the slots to prevent rotation of the sheet and the rim relative to each other.

5. A spinning toy comprising an amusement device as claimed in claim **1**, and a flexible filament extending through each of a diametrically opposed pair of slots.

6. A spinning toy as claimed in claim **5**, the filament being in the form of a continuous closed loop.

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