Aug. 14, 1951 D. DONOVAN 2,564,053

FLYING TOP-RING TOY

Filed May 10, 1948

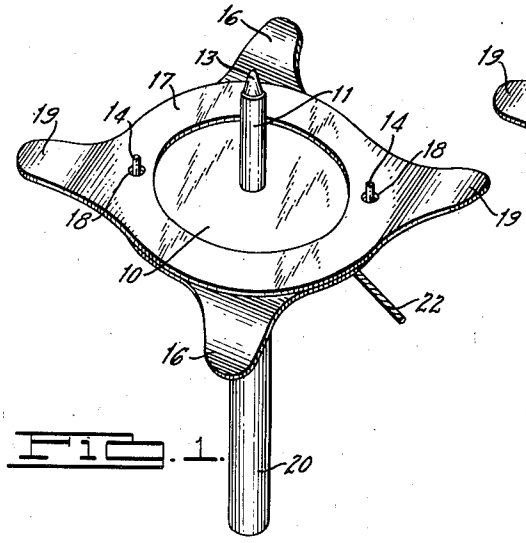


Fig. 1.

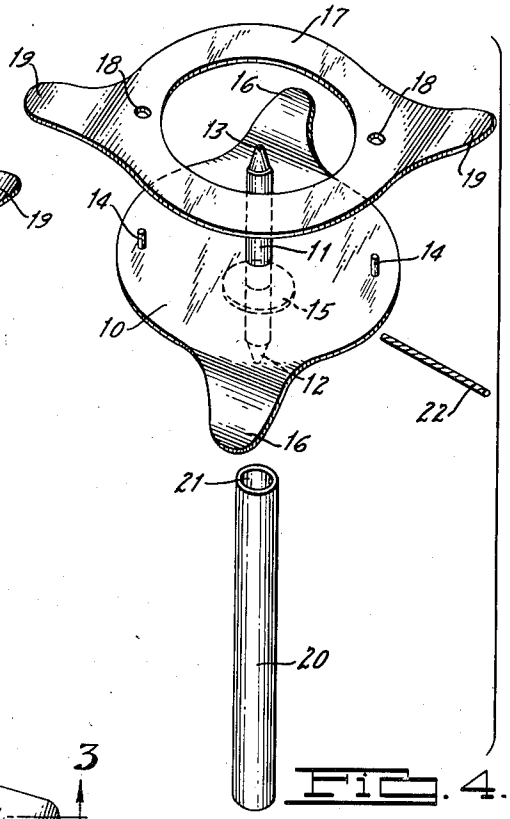


Fig. 4.

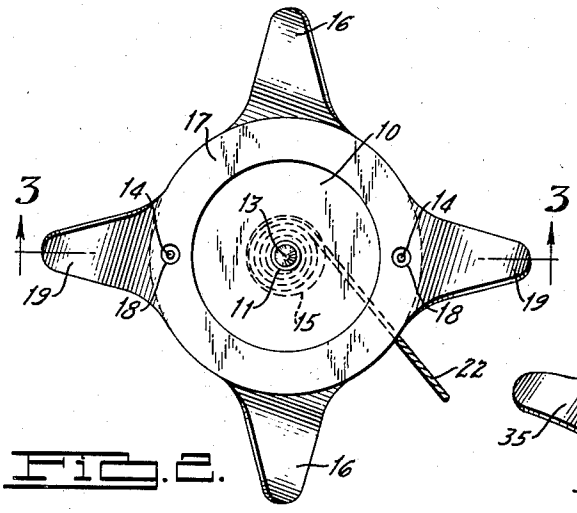


Fig. 2.

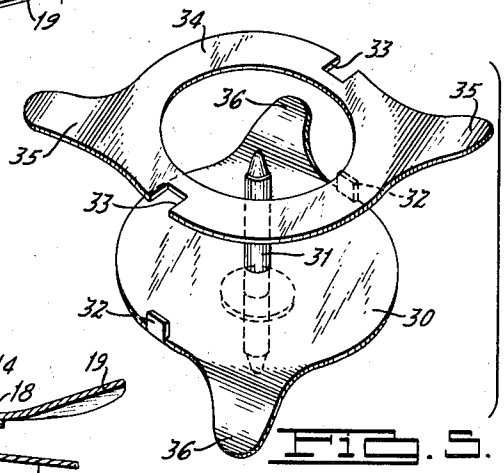


Fig. 5.

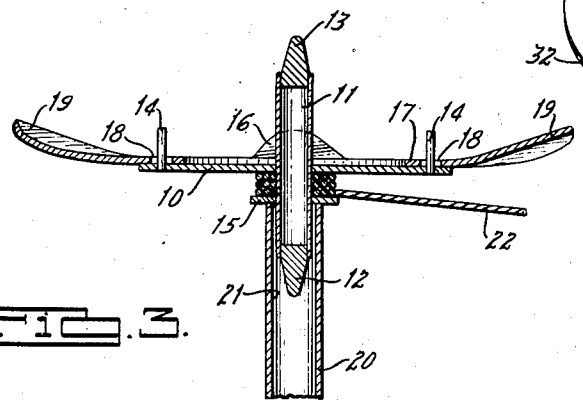


Fig. 3.

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FLYING TOP-RING TOY

Delbert Donovan, Detroit, Mich.

Application May 10, 1948, Serial No. 26,070

4 Claims. (Cl. 46—70)

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My improvement pertains to a toy being a combination of a flying top and a flying ring supported thereon and is a variation of a toy on which a patent application has already been filed by me on February 19, 1948, Serial Number 9,443.

The object of my improvement is to provide a toy which would appeal to children by virtue of the multiplicity of action resulting from the operative use of the toy, this because the toy which forms a unit at the start of the operative use thereof has component parts which dissociate themselves during said use, each of them forming a toy having its own attraction. Both of said component parts, by reason of a spinning impulse imparted to them, will fly into the air, part from each other, each taking its own individual course, whereupon one of said parts, on descent to the ground, will continue rotating as a spinning top.

A further object of my improvement is to provide a toy of very simple construction and very economical in cost.

I shall now describe my improvement with reference to the accompanying drawings in which:

Figure 1 is a perspective view of the assembled toy;

Figure 2 is a top elevation thereof;

Figure 3 is a sectional view on line 3—3 of Figure 2;

Figure 4 is an exploded view of my said toy;

Figure 5 is a perspective view of a modified species of the disc and ring of my toy.

Similar numerals refer to similar parts throughout the several views.

The toy comprises a flat disc 10, which may be made of plastic, paper, fiber, or some other similar, light substance, said disc being mounted on a vertical stem 11 which is made of a hollow tube closed at top and bottom by means of plugs 12 and 13, respectively, the plugs having conical ends as shown in the drawings. Arising from the upper surface of the disc, along its outer rim, and in a diametrical relation to each other are two vertical pegs 14. Disposed under the disc on said stem 11 in a spaced relation to said disc is a washer 15. The disc includes two diametrically disposed wings 16, these being set at a screw pitch similar to that of airplane propellers, so that said wings may form an air screw of a more or less conventional design.

A complementary part of the toy is a flying ring 17 which is substantially of the same diameter as that of the disc, the ring being provided with diametrically disposed openings 18 large enough to fit loosely over said pegs 14. In addition thereto, the ring is provided with two

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wings 19 projecting outwardly from the rim of the ring and being in a diametrical relation to each other. The wings are set at a screw pitch to form an air screw analogous to the formation of wing 16. When the ring is placed upon disc 10, the line connecting the wings of said ring is set at right angle to the line connecting the wings of the disc. In order that the toy may be used operatively, a piece of cord or string is to be wound upon stem 11 in the space between the lower surface of the disc and the washer 15. This is best shown in Figures 3 and 4. One end of the cord is loose, for manual grasp thereon, in order to impart a spinning, rotary motion to the toy. In order to facilitate this, a handle 20 is used, this having a hollow open top 21 into which said stem 11 sets freely.

In the modified species of my toy, as shown in Figure 5, I have eliminated pegs 14 and apertures 18 in the ring as shown in Figure 4. As illustrated in Figure 5, the disc 30, mounted on stem 31, is provided with upwardly turned tongues 32, these being placed along the periphery of disc 30 and arranged in a diametrical relation to each other. The ring 34, which is designed to rest on said disc 30, is provided with two recesses 33 cut in the marginal portion of the ring, the recesses being disposed in a diametrical relation to each other so as to fit over said tongues 32. The disc, as in the species first described, includes two wings 36, while the ring is provided with similar wings 35. Otherwise, the details of construction of this toy are similar to those shown in Figures 1 to 4 inclusive.

I shall now describe the operative use of my toy, referring in the course of the description to the toy shown in Figures 1 to 4. It will be understood, however, that the toy shown in Figure 5 works in substantially the same manner.

The toy, including the disc and the flying ring thereon, and with the cord wound around stem 11 as shown in Figure 3, has to be held in a handle 20 in the manner shown best in Figures 3 and 4; that is, stem 11 is inserted into the top of handle 20 to the depth allowed by washer 15. When the toy is in this position, cord 22 is quickly pulled outwardly so as to unwind it. As a result, a rotary movement is imparted to the stem which carries both the disc 10 and the ring 17, whereupon, owing to the wing formation on both the stem and the ring, both these members will rise as a unit upwardly into the air. As the disc 10 with stem 11 is much heavier than ring 17, said ring will rise upwardly quicker, dissociating itself from the disc. The disc, after a while,

will come down, spinning both in the air and, thereafter, upon the ground, the friction of the contact with the ground being minimized by the tip formation of plug 12. After a while, ring 17, upon having lost its rotary momentum, will also descend to the ground.

It will be obvious that some slight changes may be made in the construction of my toy, especially with respect to the form of the disc, the form of the ring, the number of wings carried by either the disc or the wing, or the manner of securing the wing in place upon the disc without departing from the inventive principle disclosed herein.

What I, therefore, wish to claim is as follows:

1. A toy of the kind described, comprising in combination a spinning top including a horizontal, circular disc mounted on a vertical stem, the disc having a plurality of members rising upwardly therefrom, a flat ring normally resting on the surface of the disc and being provided with openings to fit loosely over said members, both the disc and the ring being provided with a plurality of outwardly extending wings bent to a screw pitch, a holder having a hole therein for reception of the lower end of the stem and string means wound upon the stem to impart to the spinning top, upon a pull upon the free end of the string, a rapid rotary movement around its axis, both the disk and the flat ring being adapted to fly out of the holder once the disk has been set spinning.

2. A toy of the kind described, comprising in combination a spinning top including a horizontal, circular disc mounted on a vertical stem, the disc having two members rising upwardly therefrom and disposed diametrically, a flat ring normally resting on the surface of the disc and being provided with two diametrically disposed openings to fit loosely over said members, both the disc and the ring being provided with two diametrically disposed wings bent to a screw pitch, a holder having a hole therein for reception of the lower end of the stem and a string wound upon the stem to impart to the spinning top, upon a pull upon the free end of the string, a rapid rotary movement around its axis, both the disc and the flat ring being adapted to fly out of the holder once the disc has been set spinning.

3. In combination, a spinning top including a flat, circular disc mounted axially on a vertical stem mid-way the length of the stem and having, on its upper surface along the periphery thereof, in a diametrical arrangement, two upwardly extending tongues, a flat ring seated on the upper surface of the disc and having, in its marginal portion, two recesses in a diametrical arrangement, to fit loosely over said upwardly extending tongues, said disc and said ring being each provided with two outwardly extending wings bent to a screw pitch, the wings of the disc being aligned cross-wise to the wings of the ring, a holder having an oversized aperture, opening from above, to receive the lower end of the stem and a string wound upon the stem under the disc to impart a spinning motion thereto, the disc, on rotation thereof, being adapted to fly out with said ring from said holder.

4. A toy of the kind described, comprising in combination, a vertical stem having tapered ends, a flat, circular disc axially mounted thereon, the disc having two tongues extending upwardly from the body of the disc along its marginal portion and being arranged in a diametrical relation to each other, a flat ring seated on the surface of the disc and being provided with two recesses cut out in its marginal portion and in a diametrical relation to each other to fit loosely over said tongues, said disc and said ring being each provided with a plurality of outwardly extending, integrally formed wings bent to a screw pitch, a washer-shaped member axially mounted on the stem in a spaced relation to the underside of the disc, a string adapted to be wound upon said stem between said washer-like member and the disc and a holder having a vertical, tubular opening for reception of the lower end of the stem.

DELBERT DONOVAN.

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The following references are of record in the file of this patent:

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