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2,858,640

MULTIPLE-PIECE SPINNING TOP

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Figure 1

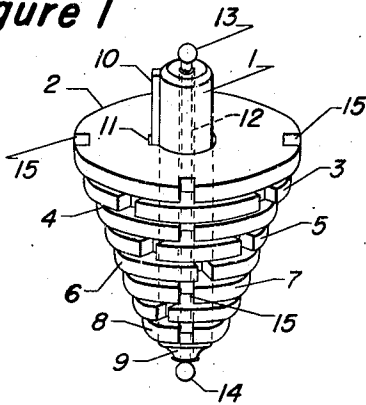


Figure 3

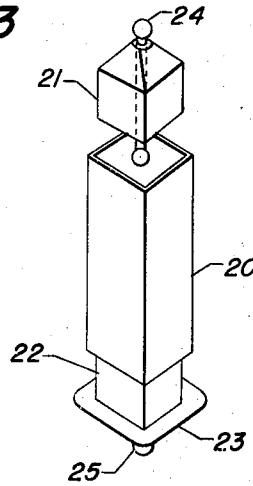


Figure 2

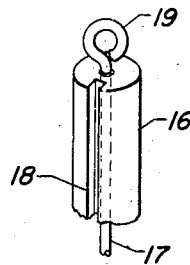


Figure 4

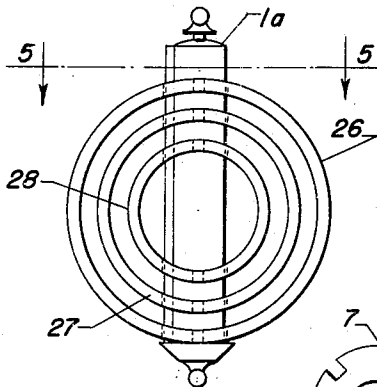


Figure 5

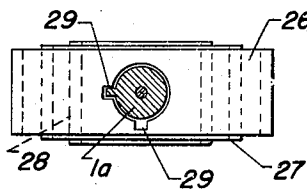


Figure 6

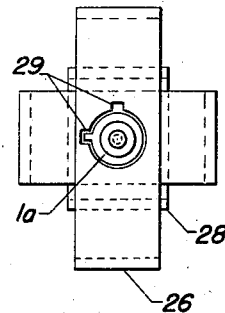
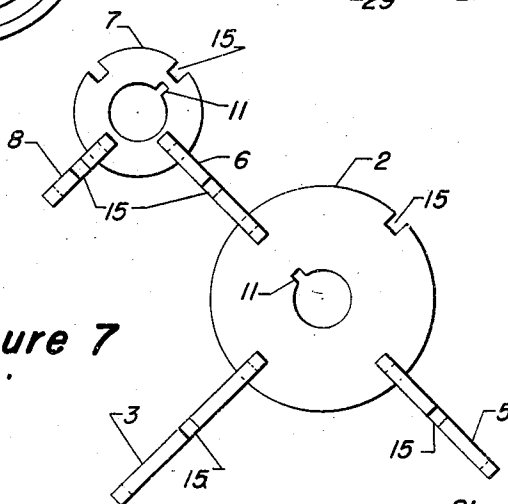


Figure 7



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MULTIPLE-PIECE SPINNING TOP

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3 Claims. (Cl. 46—16)

This invention relates to an improved type of spinning top, and more specifically, to providing for the multiple-piece construction of a spinning top which permits new and useful advantages as a toy.

The usual types of top construction provide variations in design and form but, in general, all utilize single piece bodies and fixed types of spindles or tips on which the top actually does the spinning. It is also observed that tops of the conventional single-piece construction are not easily spun by the younger children and that they have no other use as a toy. In my Patent No. 2,546,218, issued March 27, 1951, I disclose improved types of spinning tops which have rotatable pins in axially positioned sleeves whereby the top may be held while starting the spinning motion with a string, or with the fingers. The loose rotatable pin construction also permits the top to be picked up by the pin and moved to a different location with substantially no decrease in the spinning motion of the top body. In the present invention, I provide an improvement to my aforementioned patented top construction in that various body sections are adapted to fit with separate spindle sections so that there may be many modifications in the top design and contour. The separate spindle sections also utilize the improved construction, with rotatable pin means, and its resulting advantages, whereby an assembled top may be spun and then picked up and moved to a different surface as taught in the aforementioned patent.

It is a principal object of the invention to provide a spinning top having a separate spindle section and separate body sections whereby many different top body configurations may be assembled.

It is a further object of the invention to provide a multiple-piece top which has different shaped or different sized body sections which are of an interlocking nature permitting their use as a substantially separate toy.

Broadly, the present invention may be set forth as a multiple-piece spinning top comprising in combination, a separate center spindle having an axial hole bored there-through and at least one rotatable pin mounted therein, a plurality of removable body sections with each section having a perforated center portion adapted to slidably pass over and become assembled with the center spindle, and means keying the removable body sections with the spindle whereby the top may be assembled and spun.

The advantages and features of the improved multiple-piece construction are more readily set forth and understood by reference to the accompanying drawing and to the following explanation thereof.

Figure 1 shows one embodiment of the improved multiple-piece spinning top having a plurality of different sized disk shaped members engaging a separate center spindle.

Figures 2 and 3 of the drawing indicate modified types of designs and constructions for the separate spindle sections.

Figure 4 of the drawing shows an assembled multiple-piece top having a separate center spindle and a plurality

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of concentric rings or cylinder-like sections being utilized as the body of the top.

Figure 5 is a plan view of the assembled top shown in Figure 4 of the drawing.

Figure 6 shows a plan view of a top using ring sections as shown in Figures 4 and 5, but with the ring sections assembled cross-wise with respect to one another.

Figure 7 shows an assembly of disk-like body sections, such as are utilized in Figure 1, to provide an interlocking type of toy.

Referring now to Figure 1 of the drawing, there is shown a center spindle section 1 and a plurality of disk-like body sections, numbered 2 through 8, each of which has a center hole or perforation adapted to slide over the center spindle 1. Each of the disk-like body sections are preferably of a different diameter or size so that they may be assembled to provide a configuration or contour as shown, which is equivalent to that of the usual and conventional top, however, it should be noted that the disk body sections may be assembled in a random manner and the spinning of the top is not affected. The lower portion of the center spindle section 1 has a flange or shoulder portion 9 so that the lower disk member will come to rest at the bottom of the spindle. In this embodiment, the center spindle 1 is also provided with a projection 10, in the manner of a longitudinal rib or key member, whereby the plurality of disk-shaped body members may be keyed to the center spindle. In other words, each of the disk-like body sections, 2 through 8, are provided with a notch 11 at the edge of the center hole or perforation whereby they may be slipped over and engaged with the center spindle 1. It is not intended to limit the present invention to any one method of keying the multiple-piece body sections to a center spindle. For example, a square or rectangular shape, or any non-circular irregular contour of the cross-section of the center spindle section, which is conformed to by the perforate portion of the body section, will provide a suitable keying means with the various body portions of the spinning top.

It is also a feature of the present embodiment of the improved multiple-piece spinning top of this invention, to provide at least one rotatable center pin through the center spindle section of the top, such as the pin 12. Pin 12 is provided with a top ball piece 13 and a lower point or ball piece 14 such that the pin is retained within an axially bored hole through the center spindle when the top is in use. The construction of the separate center spindle may be as shown with one long pin 12 extending from the top to bottom thereof, or alternatively, a rotatable pin may be provided at only the top or the bottom portion of the center spindle so as to provide the desired means for picking up or initially holding the assembled spinning top while the body portion is rotating. A double rotating pin arrangement may also be provided. In other words, a separate top pin and a separate bottom pin may be utilized rather than a single pin within a single hole or sleeve extending through the entire axial length of the center spindle section.

It is a feature of the present embodiment utilizing the multiplicity of disk-like sections, 2 through 8, to provide at least one notch, like those indicated by the numeral 15, around the periphery of each of the disk-like sections. The width of each notch 15 is made equivalent to the thickness of each disk-like section, and the latter are preferably all made of equivalent thicknesses, so that the disk sections may be interlocked and played with by a child as a separate toy. Figure 7 of the drawing, shows a plurality of the body members being assembled together in an interlocking manner by utilization of the notches 15 at the edges of each of the adjoining disk members.

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Referring now to Figure 2 of the drawing, there is shown a portion of a modified construction of a center spindle for a spinning top, the spindle section being indicated by numeral 16 and the center rotatable pin by the numeral 17. In this instance, the spindle section 16 is provided with a notch or groove 18 running throughout the length of the center spindle section 16, whereby a plurality of body sections may be keyed to the spindle by means of a suitable protrusion or key member which will fit into the groove 18 and conform therewith in a slidable fit. Also in the embodiment, the end portion of the center pin 17 is provided with an eye-like section 19 which in turn provides a suitable means for holding the rotatable pin while the body of the top is spinning with the spindle. In like manner, the lower end of the pin 17 may be provided with an eye-like member similar to 19 so that a suitable point or tip is provided for spinning the assembled top.

Referring now to Figure 3 of the drawing, there is shown a three-piece center spindle section for a spinning top, comprising a hollow or tubular center section 20, an upper section 21, and a lower flanged section 22. As noted hereinbefore, the separate center spindle sections may have different contours or configurations whereby the multiple-piece body sections may be keyed therewith, and in this instance, the spindle section is of a substantially square or rectangular shaped so that conforming square or rectangular perforations in each of the body sections will permit the latter to be keyed to the center spindle. The end sections 21 and 22 are sized to slidably fit into the center tubular section and provide an assembled spindle. The lower section 22 is, however, provided with a flange or projection 23 whereby the lower body section may come to rest in assembling the top. Also, as described in connection with Figure 1 of the drawing, a hole or sleeve is provided axially through the center spindle and a rotatable pin member 24 is provided to rotate freely within the upper section 21. Similarly, a rotatable pin 25 may be provided for the lower section 22.

Referring now to Figure 4 of the drawing, there is shown a center spindle section 1a, which may be of substantially the same design and construction as set forth in Figure 1 of the drawing, or alternatively may be of a different cross-section or modified design which will permit keying with a plurality of body sections. A plurality of concentrically positioned ring-like members or sections of cylinders, indicated as 26, 27 and 28, are slidably positioned over and keyed with the separate spindle section 1a. Each of the ring sections, 26, 27 and 28 have opposing perforate portions designed to conform with the exterior of the separate center spindle 1a and thus be slidably removable with respect to the latter. The assembled ring sections provide a drum-like shaped top which is of unusual construction, but may be spun with a string or by the fingers in the same manner as other conventional forms of tops. It is to be noted, that the plurality of ring-like body sections may be assembled in the manner shown in Figure 4 and in the Figure 5, the latter figure providing a plan view of the assembled top, as indicated by the line 5-5 in Figure 4 of the drawing.

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It is also within the scope of the present invention to provide a keying means between the body sections 26, 27 and 28, or a further number of body members, so that the latter may be assembled in a different manner with respect to the center spindle portion 1a. For example, by providing two notches 29 in the perforate portions in the wall of the ring-like sections, as indicated by notches 29, the ring members can then be placed crosswise with respect to one another, as indicated in Figure 6 of the drawing. It will be noted that by utilizing a different notch 29 on the projection of the center spindle, that the ring-like member 27 is at right angles with respect to the ring-like members 26 and 28.

I claim as my invention:

1. A multiple-piece spinning top comprising in combination, a center spindle having an elongated portion thereof which is of uniform non-circular cross section and a flange at one end, said spindle having an axial hole provided therethrough and a rotatable pin positioned in and extending through said hole, at least one removable body section having an open center portion of uniform non-circular cross section and freely slidable over said elongated spindle to key therewith and rest upon said flange of said spindle whereby the top may be assembled and spun.

2. The spinning top of claim 1 is further characterized in that said removable body section comprises a plurality of disk shaped sections of equal thickness and of varying diameter, with each individual disk section having a plurality of notches, said notches being spaced around the periphery of the disk and each having a width equal to the thickness of said disks whereby the disk sections when removed from the spindle may be placed within notches and effect an interlocking friction engagement with one another.

3. A multiple-piece spinning top comprising in combination, a flanged center spindle having an elongated portion which is of uniform non-circular cross section, with said spindle having a hollow center portion and separate end pieces sized to slideably engage with the respective ends of the center portion, each of said end pieces having an axial hole bored therethrough and a rotatable pin positioned in and extending therethrough, at least one removable body section having an open center portion of uniform non-circular cross section and freely slideable over said elongated spindle to key therewith and rest upon said flange of said spindle whereby the top may be assembled and spun.

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