June 26, 1951 G. H. W. SCHULTZ 2,558,464

JINGLE BELL TOP

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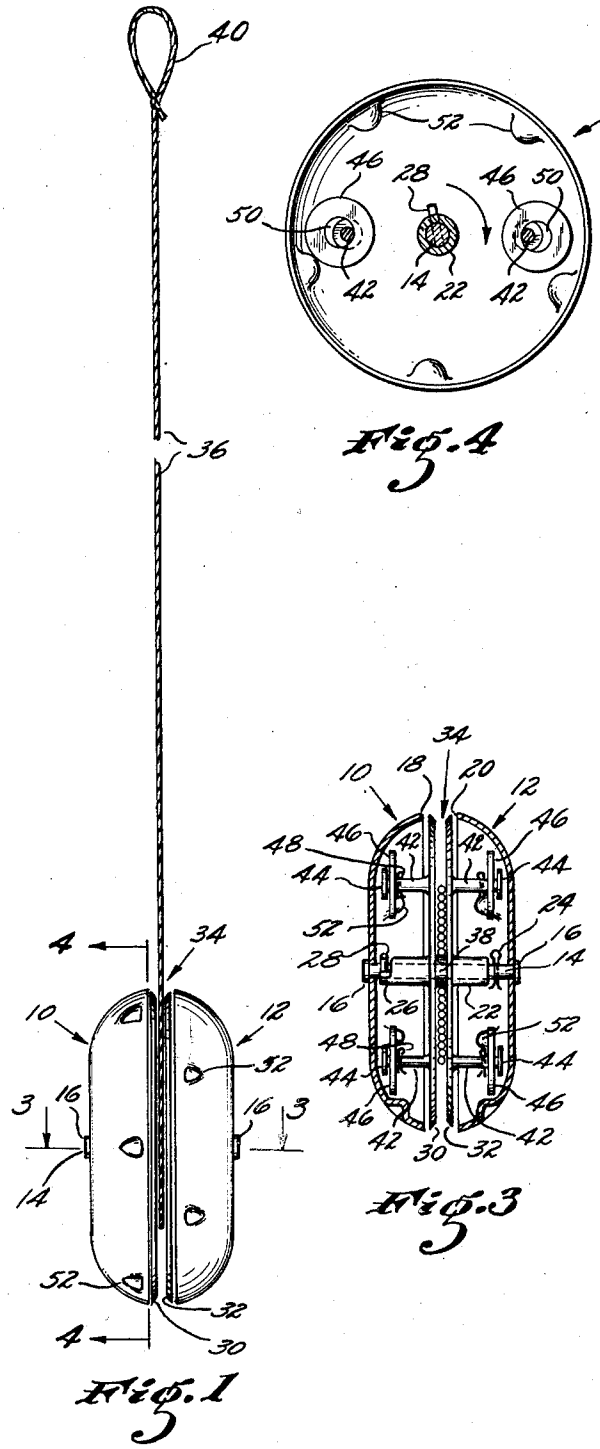


Fig. 1

Fig. 3

Fig. 4

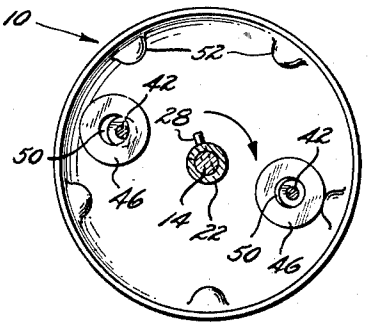


Fig. 5

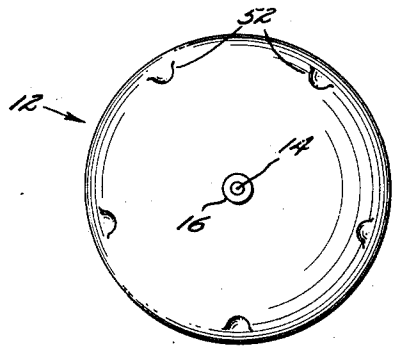


Fig. 2

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JINGLE BELL TOP

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6 Claims. (Cl. 46—61)

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This invention relates to a vertically operating top, one make of which is called a "Yo-Yo," and more particularly to such a toy which is characterized by the emission of a ringing sound or jingle.

Such tops which emit sound either by means of internal strikers or by loose beads confined within the shell are known. However, in both cases, the sound is supposed to be emitted more-or-less continuously during up and down movement of the top; and in either event the striking member is liable to become stuck within the spinner as well as to throw it off balance by a change of position. By the present construction, in contrast, there is no chance of the striking members becoming stuck and the strikers always retain their same relative position; in addition, the jingle-bell or ringing effect is produced only intermittently, specifically at the bottom or unwound phase of the operating cycle, thereby creating a more pleasing effect.

Accordingly it is an object of the invention to provide such a top which "rings" at the bottom of the vertical reciprocating cycle of operation thereof and not during its up and down movement.

Another purpose is to provide a spinning top having tortional means adapted to accelerate rewinding of the top on the cord when the top reaches the end of its unwinding, that is, at the bottom of its vertical course.

Still another object is the provision of such a top wherein the operating cord is spirally wound within a radial channel carried by a bearing sleeve which is rotatably disposed on an axle within the shell of the top, so that the bearing sleeve and attached structure can rotate at least partially within the outer bell-structure or shell of the top.

Yet another feature resides in the provision of annular or doughnut-shaped strikers loosely mounted on laterally projecting pins carried by disks mounted on the bearing sleeve, so that the strikers by centrifugal force contact inwardly projecting lugs or dimples disposed on the shell or bell portions, whereby the bell rings upon rotary movement of the bearing sleeve in relation to the bell.

Other objects and advantages of the invention will be apparent from the following description and claims, the novelty consisting in the features of construction, combination of parts, the unique relations of the members and the relative proportions, disposition, and operation thereof, all as more completely outlined herein and particularly pointed out in the appended claims.

In the drawings, which form part of the present specifications:

Figure 1 is an elevational view of my jingle bell top;

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Figure 2 is an outer face view of a half-shell or bell member of the top;

Figure 3 is a transverse sectional view, taken thru the top along the line 3—3 of Figure 1; and

Figures 4 and 5 are inner face views of a bell member as viewed along the line 4—4 of Figure 1, showing the striker member hitting the bell projections at the bottom of the top course.

As illustrated, a pair of oppositely facing, inwardly opening dished or resonant members or bells 10, 12 are secured to opposite ends of a central shaft 14 by rivets 16 or other means, the rims 18, 20 of the bells being spaced apart a small amount. Between the bells, a tubular bearing sleeve 22 is rotatably mounted on the shaft so as to revolve freely thereabout. At its one end, the sleeve is restrained against axial movement by means of a cotter pin 24 inserted thru the shaft, while at its other end, a longitudinally projecting lug 26 is disposed in the path of a radial stop 28, for a purpose which will be shortly evident.

Fixedly secured to the bearing sleeve 22 about its midportion, are a pair of radial disks 30, 32 of a circumference generally corresponding to the perimeter of the adjacent bells, being disposed between the rims 18, 20 and mutually spaced apart so as to define an outwardly opening channel 34. The operating cord 36 is connected at one end to the sleeve portion 38 between the two beveled disks, and thence wound upon itself in a spiral pattern within the channel 34 until its outer terminal loop 40 is brought adjacent the bell rims 18, 20.

Each disk 30, 32 carries a pair of axially projecting cylindrical studs 42 about midway between the center and perimeter of the disk, each stud having a flared head 44 formed or attached at its outer end. A metallic washer or annulus 46 is loosely disposed on each stud between its flanged terminus 44 and a cotter pin 48 which extends thru the stud. As seen particularly in Figures 4–5, the central opening 50 of the washer is considerably larger than the diameter of the stud 42 so that the centrifugal force of the revolving disks 30, 32 throws the washers to an "outer" position shown in Figure 5. In such position, if the bells 10, 12 are not rotating at the same speed as the disks, the washers will strike against successive dimples or depressions 52 formed along their pathway in the adjacent bell 10 or 12.

Accordingly, when the player inserts a finger thru the loop 40 and allows the top to drop or unwind from his hand, the bells 10, 12 and disks 30, 32 rotate in unison, locked together by contact of the lug 26 and stop 28. When the bottom of the "throw" is reached, the angular momentum of the bells 10, 12 and axle 14 cause them to continue in a rotary path until the stop 28 has come around to the other side of the lug

26; the momentum (which may be accentuated by an upward jerk of the cord 36) then causes the two units (axle 14 and bearing sleeve 22 with their connected structures) to wind up on the cord in unison.

However, while the axle 14 turns within the bearing 22, the bell depressions 52 strike against the adjacent washers 46, thus causing the respective bells to ring. At the same time, the washers roll freely over the bell dimples due to the clearance afforded by the pin 42 within the washer opening 50.

Thus it will be seen that I have provided a highly effective, easy operating and comparatively simple toy. While I have shown and described in some detail a presently preferred embodiment of my top, it is to be understood that various modifications may be made in the construction and operation thereof within the spirit and scope of the subsequently claimed invention which it is my intention to claim broadly within the limitations imposed by the prior art.

I claim:

1. A reciprocable top of the character described, comprising in combination: an axle; a resonant member fixedly secured to said axle, said member having at least one laterally extending projection; a bearing sleeve mounted on said axle; a channel-forming element carried by said sleeve adjacent the resonant member; an operating cord disposed in said channel with one end affixed to the bearing sleeve therein; stop means disposed on the axle cooperable with the sleeve to provide for simultaneous movement of said axle and sleeve; and at least one striker carried by the channel-forming element in the path of the projection of the resonant member so as to contact the latter and cause it to vibrate upon relative rotary movement of the bearing and axle, upon the top rapidly unwinding from the cord.

2. The top of claim 1 wherein said stop means include a longitudinally projecting tongue carried by the bearing sleeve, and an elevation located on said axle in line with the tongue and disposed, to abut against opposite sides thereof upon rotary movement of the axle in opposite directions.

3. A reciprocable top of the character described, comprising in combination; an axle; a pair of resonant members fixedly secured to said axle, said members being laterally spaced apart and having inwardly extending projections; a bearing sleeve mounted on said axle between the resonant members; a pair of disks carried by said sleeve and laterally spaced apart so as to define a channel therebetween; an operating cord disposed in said channel with one end affixed to the bearing sleeve therein; stop means disposed on the axle cooperable with the sleeve to provide for simultaneous movement of said axle and sleeve; and strikers carried by said disks so as to be disposed by centrifugal force in the path of the projections of the resonant members so as to cause the latter to vibrate upon relative rotary movement of the bearing and axle, upon the top rapidly unwinding from the cord.

4. The top of claim 3 wherein said disks are provided with outwardly projecting pins disposed adjacent the projections of the resonant members, and said strikers comprise washers loosely mounted on said pins and having a central opening of greater diameter than the diameter of the pins whereby the washers will pass beneath a resonant projection after striking the same.

5. A reciprocable top of the character described, comprising in combination; an axle; a pair of resonant members fixedly secured to said axle, said members being laterally spaced apart and having inwardly extending projections; a bearing sleeve mounted on said axle between the resonant members; a pair of disks carried by said sleeve and laterally spaced apart so as to define a channel therebetween; an operating cord disposed in said channel with one end affixed to the bearing sleeve therein; a longitudinally projecting tongue carried by the bearing sleeve and an elevation located on said axle in line with the tongue and disposed to abut against opposite sides thereof upon rotary movement of the axle in opposite directions; outwardly projecting pins carried by said disks adjacent the resonant members; and washers loosely mounted on said pins, which washers have a central opening of greater diameter than the diameter of the pins, whereby the washers by centrifugal force will strike the projections of the resonant members so as to cause the latter to vibrate upon relative rotary movement of the bearing and axle upon the top rapidly unwinding from the cord, and will then pass beneath the projections.

6. A vertically reciprocal top of the character described, comprising in combination: a channel-forming member including an axle and a pair of perpendicular walls radially projecting therefrom and laterally spaced apart so as to permit an operating cord to be spirally wound upon itself in the channel formed between the walls, with the inner end of the cord secured adjacent the axle; a pair of resonant members mounted at opposite ends of said axle and adapted to rotate about its axis independent of the channel-forming member, said members having projections thereon; at least one loosely-mounted striking element carried by the channel-forming member and disposed to strike one of said resonant members by centrifugal force upon relative rotation of the channel-forming member with respect to the resonant members; and stop means adjacent at least one of said resonant members coacting with stop means adjacent said channel-forming member to provide for simultaneous movement of said channel-forming member and resonant members whereby upon unwinding of the cord in the channel member said coacting stop means will permit of relative movement between said channel-forming element and said resonant members and said striking element will strike said projections.

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