

# United States Patent

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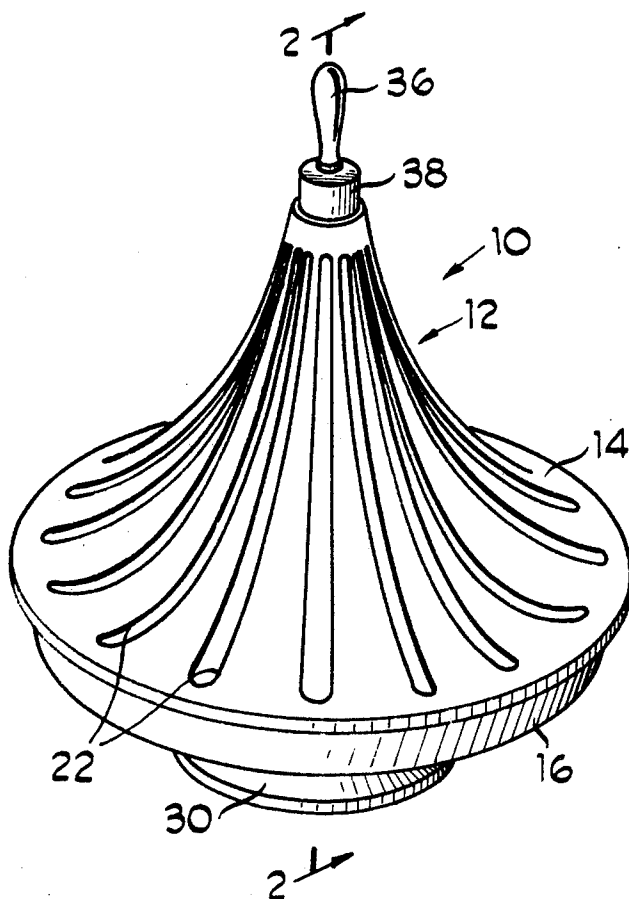
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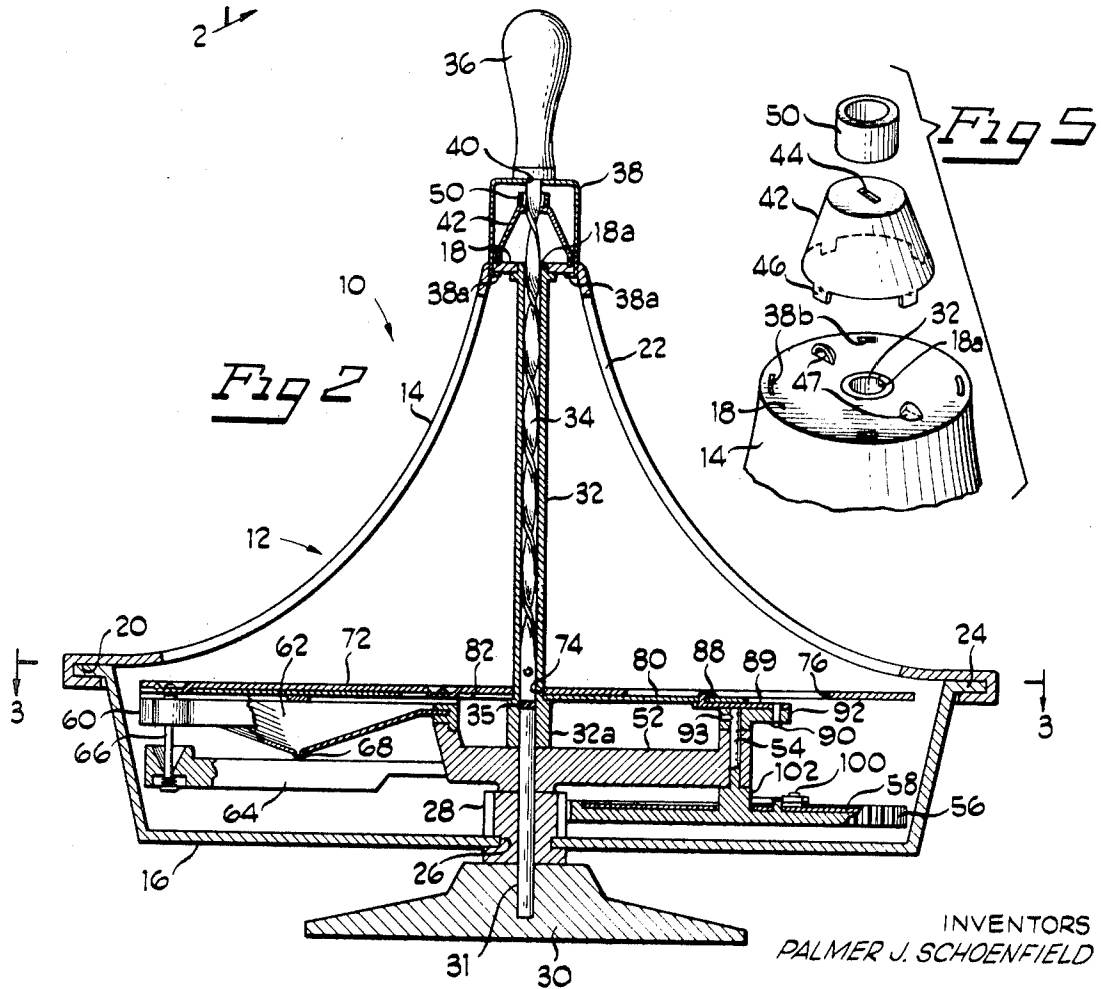
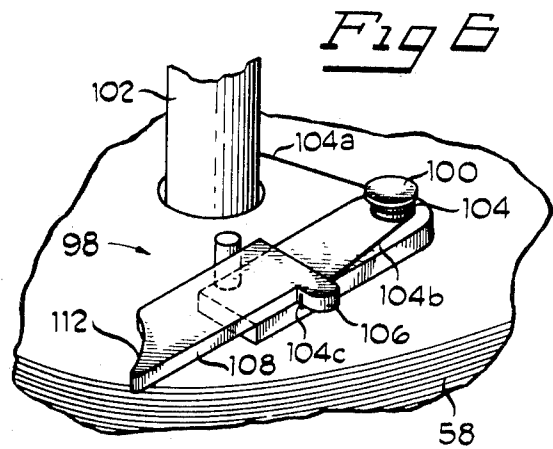
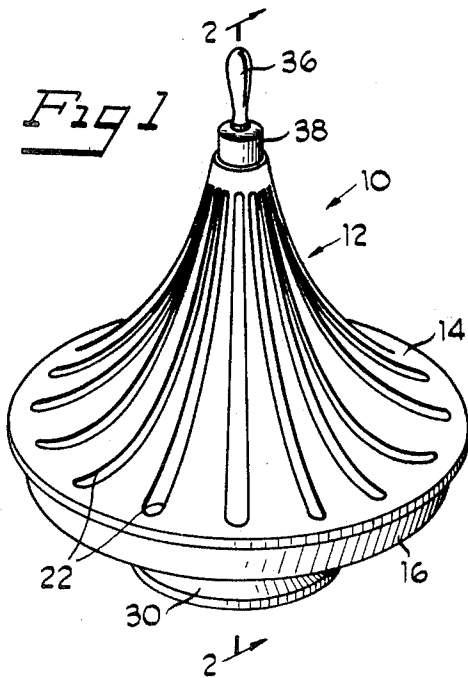
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[54] **TOP WITH PHONOGRAPH**  
**1 Claim, 6 Drawing Figs.**

[52] U.S. Cl..... 46/66,  
 46/68  
 [51] Int. Cl..... A63h 1/06  
 [50] Field of Search..... 46/65—68

**ABSTRACT:** A toy top of the type having a helical ratchet member for imparting a spinning motion responsive to vertical to and fro movement of the ratchet member with a phonograph mechanism driven by the ratchet mechanism and decorative surfaces in the interior of the top and visible from the exterior thereof, with at least one of the decorative surfaces movably driven relative to the other responsive to the ratchet action of the top.





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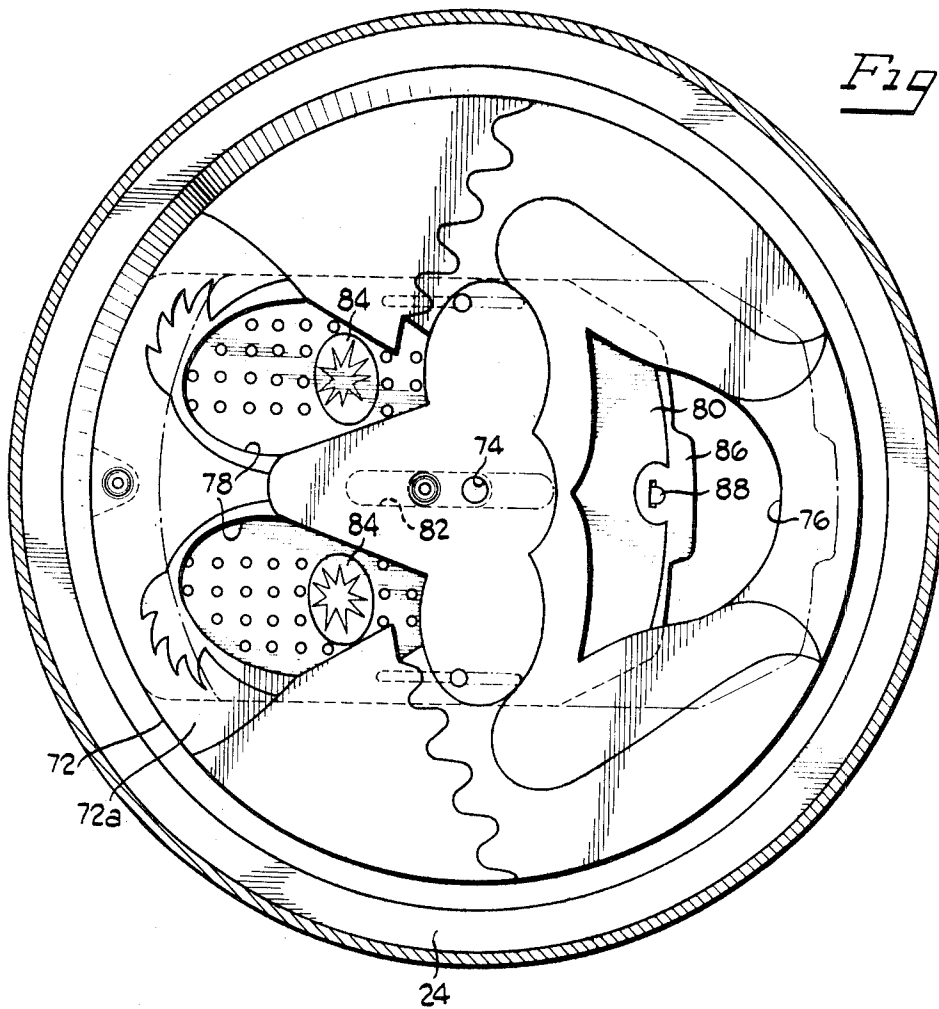


Fig 3

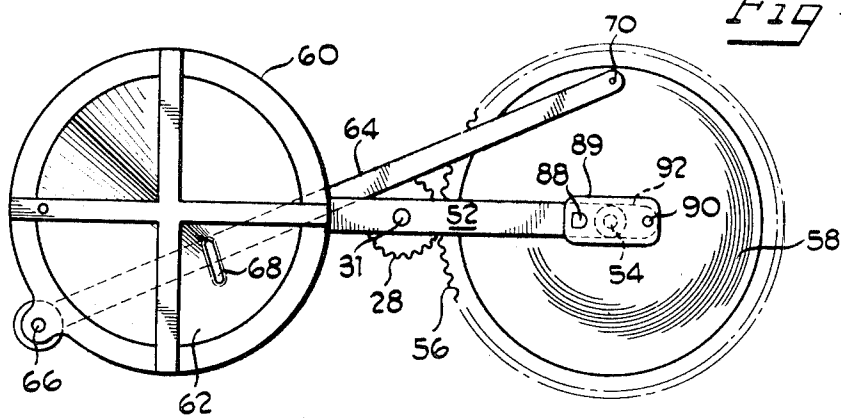


Fig 4

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## TOP WITH PHONOGRAPH

## BACKGROUND OF THE INVENTION

## 1. Field of the Invention

This invention relates to amusement devices and, more particularly, to a top having phonograph mechanism and simulated animated means driven responsive to spinning of the top.

## 2. Brief Description of the Prior Art

Toy tops of the type having a central helical shaft and interconnected gear mechanism for rotating the top responsive to vertical action of the shaft are well known in the art. Furthermore, it is also known to construct such tops in a fashion so that a musical sound or the like emanates therefrom as the top is rotated. In most instances this has been accomplished by forming openings or vanes in the housing of the top which will produce a humming sound as the top is rotated at a relatively high rate of speed. An example of such a structure is shown in the Sefcik U.S. Pat. No. 3,272,054.

It is further known to provide in such tops, musical producing means including reeds movably positioned in the interior responsive to currents of air generated as the top is rotated to thereby produce musical sounds as the air passes through the reed. An example of this construction is shown in the Brutting U.S. Pat. No. 2,809,548.

Beach U.S. Pat. No. 1,285,595 shows a top wherein the interior is provided with a phonograph record, stylus and speaker, but the top is of the type which is spun by winding a cord thereabout and not by the ratchet action of a shaft.

It is further known that children are fascinated by toys that involve movement of components parts or simulated animation. Whereas the tops of the type described hereabove spin and therefore provide movement to the interest of the child, the movement is only relative to the supporting surface of the top and not to other components of the top which could furnish a form of simulated animation to the enjoyment of the user of the top.

## SUMMARY OF THE INVENTION

This invention is directed, in brief, to the provision of a top of the type actuated by the vertical to and fro movement of a ratchetlike shaft, wherein the top is provided with phonograph mechanism in the interior thereof for reproducing a message or musical composition, the phonograph being driven by the means for rotating or activating the top. In addition, the top is further provided with viewable surfaces in the interior thereof, at least one of which is movable relative to the other, the movement of the said one surface being further driven by the means for rotating the top.

In the best mode currently contemplated for carrying out the invention, the drive shaft of the top is in engagement with a phonograph turntable rotatably mounted within the interior of the top for rotating the same as the top rotates. The usual tone arm and speaker are operably associated with the turntable to produce sound from a record on the turntable as the top is rotated. In addition, the interior of the top is provided with two relatively movable surfaces, one of which is also interconnected with the top drive shaft to move relative to the other surface.

Preferably, the housing of the top is provided with means for viewing the action in the interior thereof, such as a transparent cover or a cover with a plurality of radially arranged openings or slits. Thus, during operation, the combination of the revolving slitted or transparent housing together with the relatively movable surfaces in the interior provide an object of visual interest to a child, and the simultaneous message or musical reproduction of the phonograph mechanism attracts the audio interest of a child.

## BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of the musical top of this invention;

FIG. 2 is a vertical section view of the top shown in FIG. 1;

FIG. 3 is a partial section view taken generally along the line 3-3 of FIG. 2;

FIG. 4 is a top plan view of portions of the phonograph mechanism of the top of this invention;

FIG. 5 is an exploded view of the assembly of the upper portion of the top of this invention; and

FIG. 6 is a fragmentary enlarged perspective view of a portion of the tone arm return structure for the phonograph mechanism of the top of this invention.

While this invention is susceptible of embodiment in many different forms, there is shown in the drawings and will herein be described in detail a specific embodiment thereof, with the understanding that the present disclosure is to be considered as an exemplification of the principles of the invention and is not intended to limit the invention to the embodiment illustrated.

## DESCRIPTION OF THE PREFERRED EMBODIMENT

The top 10 of this invention includes a housing 12 preferably made of a suitably rigid material, such as a durable plastic or metal. The housing includes an upper portion 14 having an outline or contour which is similar to that defined by the revolution of parabola about an axis, or bell shaped, and a lower portion 16 which is a generally annular pan shaped structure.

The upper portion of housing 12 has a truncated flat top surface 18 with an opening 18a formed generally centrally thereof. The remainder of the upper portion depends therefrom in the aforesaid bell shape and terminates in an open end bent upon itself to provide an inwardly facing annular groove 20. The upper portion 14 may be formed of a transparent material or may be provided with light-transmitting portions, such as the generally uprightly extending slots 22 as shown, or both.

The annular sidewalls of the lower portion terminate in an outwardly extending lip 24. Lip 24 occupies the inwardly facing groove 20 of the upper portion 14 to secure the two together. An opening 26 is formed generally centrally of the bottom of lower portion 16 in which a gear member 28 is fixed. Gear 28 is supported on a pedestal 30 and impaled by a pin 31 about which the gear rotates. Pin 31 is secured in pedestal 30 and extends through gear 28 centrally of the gear and opening 26, the pin being generally coincident with the axis of rotation of the top 10.

A generally circular cylindrical sleeve 32 is positioned in the opening 18a and depends downwardly therefrom. An enlarged lower end 32a of sleeve 32 is impaled upon pin 31 and the sleeve is rotatable relative thereto. Helical shaft 34 is positioned within the sleeve 32 about pin 31 with a suitable cushion means, such as a rubber pad 35 between pin 31 and the bottom of helical shaft 34. The shaft 34 projects to the exterior of the upper portion 14 and a handle 36 is affixed thereto. A cap 38 has tabs 38a which extend through slots 38b to affix the cap to the housing 12. The cap 38 is also provided with a central opening 40 through which the helical shaft 34 extends.

Below cap 38 and to the interior thereof is a generally frustoconical clutch member 42 having a central slit 44 through which the helical shaft 34 extends. The bottom of member 42 has tabs 46 which are intended to engage ears 47 formed on surface 18 (FIG. 5) as helical shaft 34 is moved downwardly and initially rotates clutch 42 until the tabs 46 abut ears 47. When handle 36 and therefore shaft 34 is moved upwardly, clutch 42 is also vertically uplifted out of engagement with ears 47. A generally circular cylindrical bushing 50 is positioned loosely between the clutch 42 and the interior of the cap 38 so as to permit upward movement of 42 and disengagement of tabs 40 and ears 47. Thus, by this arrangement, as the handle 36 is grasped and moved vertically to and from to move the helical shaft, the top will be spun about its support 30 in the well-known fashion.

An arm 52 is impaled on pin 31 between gear 28 and the end of sleeve 32. At one end of the arm 52 there is rotatably

received a shaft 54 which supports a gear 56 that depends therefrom. Gear 56 is in engagement with gear 28, and is driven thereby as handle 36 and shaft 34 are activated in the manner described. The gear 56 acts as a turntable for a phonograph record 58, and in the preferred embodiment, the record is embedded in the top of gear 56.

The other end of arm 52 supports a generally circular cylindrical speaker support structure 60 in which speaker 62 is mounted. A tone arm 64 is pivotally mounted on a pin 66 that depends from the support 60 for pivotally mounting the tone arm 64 with respect thereto.

The intermediate portion of the tone arm is in engagement with the apex 68 of the speaker and the free end of the arm (FIG. 4) has a needle or stylus 70 which tracks on the grooves of the record 58 in the well-known fashion. Thus, as the gear 56 is rotated responsive to actuation of the top, sound will be reproduced out of the speaker 62.

A dislike decorative member 72 having a decorative surface 72a is positioned above the several phonograph and gear members described, in the area of the juncture of the upper and lower portions 14 and 16, respectively. The decorative member 72 has a central opening 74 that closely mates with the exterior of sleeve 32. In the illustrated embodiment, the decorative surface 72a of member 72 is shown as a representation of a clown's face and includes cutout portions such as the cutout area 76 in the area of the mouth of the clown face simulated thereon, and the cutout portions 78 in the area of the eyes of the clown face simulated thereon.

A movable decorative member, in the form of a generally rectangular panel 80, underlies the disc 72. Panel 80 is provided with an elongate slot 82 through which sleeve 32 extends. The panel is positioned over the enlarged end 32a of the sleeve and underlies the disc 72. The elongate slot 82 permits the panel 80 to move to and fro with respect to the sleeve 32.

In the area underlying the eye cutouts 78, the panel 82 is provide with simulated eyeballs 84. Similarly, in the area underlying the mouth cutout 76 the panel has a simulated jaw representation 86. In addition, the panel may be perforated as shown in the area overlying the speaker 62 to permit the transmission of sound therethrough.

A tab 88 extends through the tongue portion 86 of panel 80 and comprises an extension of link 89 that is pivoted to a pin or rivet 90. The pin 90 is positioned in one end of a crank arm 92. The other end of crank arm 92 is fixed, by setscrew 93 to the shaft 54 rotatably positioned in arm 52. Thus, as the shaft 54 is rotated, responsive to rotation of gear 56, the crank 92 is also rotated and, through the interconnection of link 90, tab 86 and by means of the provision of elongated slot 82, the panel 80 is moved to and fro relative to the decorative member 72. Such simulated animation produces the visual effect of blinking eyeballs and a moving jaw in the particular embodiment described herein. In those instances where upper portion 14 is made of a clear plastic or the like, the simulated animation may be easily observed. In addition, it must be remembered that this movement occurs as the top is rotated. Even if upper portion 14 is opaque, the rapid rotation gives the illusion of a clear top by reason of the slits 22 so that the animated movement may be easily observed. Simultaneous with this rotation of the top and the relative animated movement in the clown face, the tone arm is in engagement with the rotating record 58 so that a musical or word message is transmitted through the speaker 62. Thus, the top provides the

simultaneous visual and audio enjoyment to the user.

Means 98 are provided for returning the tone arm 64 to the starting position at the exterior or periphery of the record 58 following termination of the message thereof. In the preferred embodiment, the gear 56 is provided with an upstanding post 100 near the hub 102. A spring 104 is positioned about the post and has two legs, one of which, 104a, is biased against the hub 102, and the other of which, 104b, extends at a generally 90° angle thereto. Leg 104b terminates in an upturned end 104c which captivates the finger 106 of return member 108. Return member 108 is pivoted on pin 100. The free end of return member 108 generally opposite finger 106 is arcuately recessed as at 112.

In operation, as the tone arm travels across the record at the completion of the message, the needle 70 will strike the curved end 112 of return member 108 and be elevated off the record. The continued rotation of the record will cause member 108 to be moved radially outwardly of the record to thereby carry tone arm 64 across the record with the needle out of engagement with the record. As the needle end of the tone arm reaches the periphery of the record, it moves out of curved end 112 onto the record and the return member will return to the position shown in FIG. 6 under the biasing action of spring 104.

This invention provides a spinning top of the ratchet action type which affords multiple forms of enjoyment to a child. In addition to the spinning action of the top, the recorded message or musical composition is played through the record mechanism simultaneously with the spinning action. At the same time, a viewable surface such as the simulated clown face, is displayed and the viewable surface is animated, in that portions of it move relative to other portions, such as the simulated eyeballs and tongue on the movable panel 80 which underlie the openings in the member 72. Thus, the top gains the attention and holds the interest or attraction of a child through several different sensory perceptions; that of the sound of the record, the sight of the spinning top and the further fascination of the movable design in the interior of the top which may be viewed through the rotating slits 22 or clear upper portion 14.

The foregoing detailed description has been given for clearness of understanding only, and no unnecessary limitations should be understood therefrom, as some modifications may be obvious to those skilled in the art.

I claim:

1. In a top having a housing including means for viewing the interior of the housing, a vertical spiral drive shaft, means operably connecting the drive shaft and the housing for rotation of the latter in response to reciprocation of the drive shaft, a phonograph device within said housing including a turntable having a phonograph record thereon, means connecting said turntable with said housing to provide for rotation of the turntable in response to rotation of said housing, frame means nonrotatably fixed within said housing and including a generally horizontally disposed first decorative surface, a second decorative surface overlying said first decorative surface and mounted for movement relative thereto, and means connecting said turntable with said second decorative surface so that rotation of said turntable produces movement of said second decorative surface relative to said first decorative surface.