

[54] **SWING OPERATED MUSIC BOX**
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 [51] Int. Cl. **G10f 1/06**
 [58] Field of Search **84/94-101; 46/175; 272/86**

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Primary Examiner—Lawrence R. Franklin
Attorney—Zachary T. Wobensmith

[56] **References Cited**
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[57] **ABSTRACT**
 A swing operated music box is disclosed in which operating and control mechanism is interposed between a reciprocating part of a swing and a music box, the mechanism including a resilient lever swingably and pivotally mounted on a fixed part of the swing.

4 Claims, 3 Drawing Figures

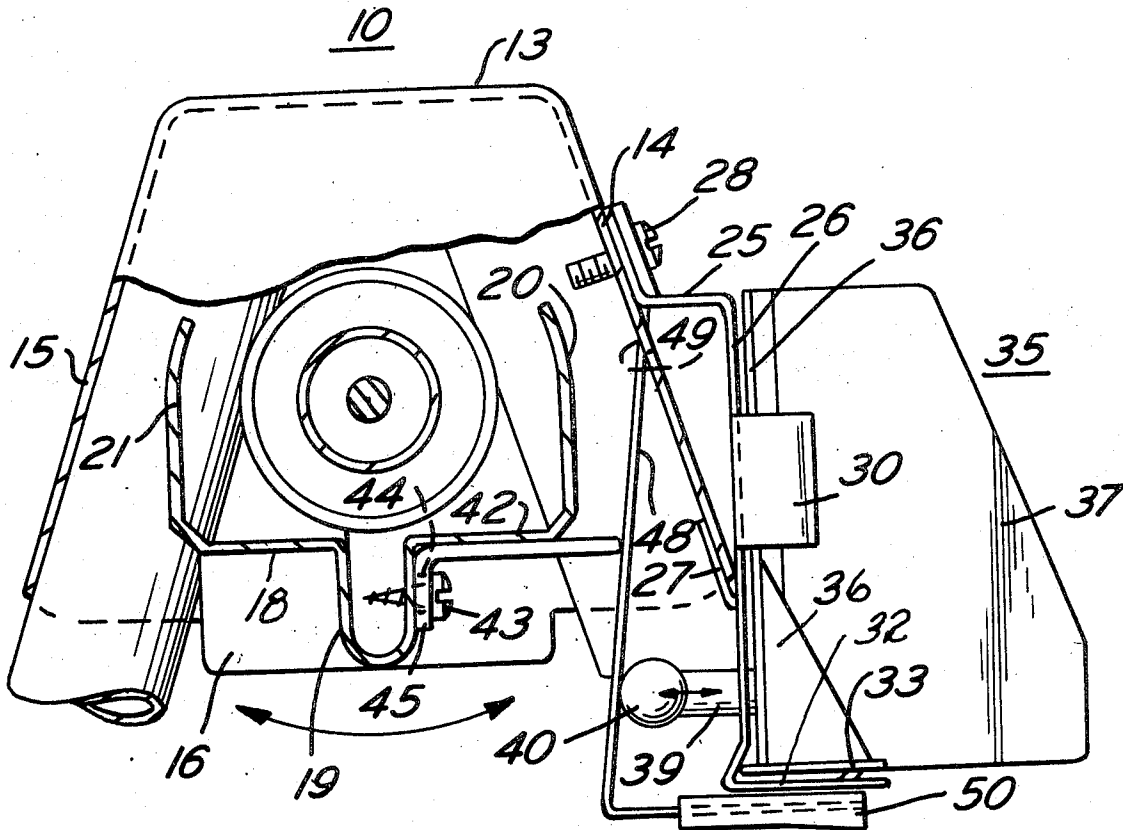


FIG. 1

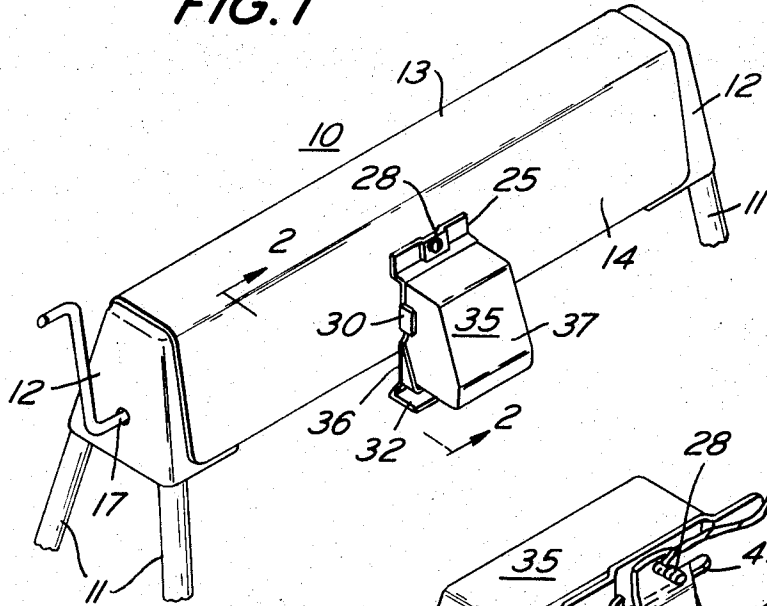


FIG. 3

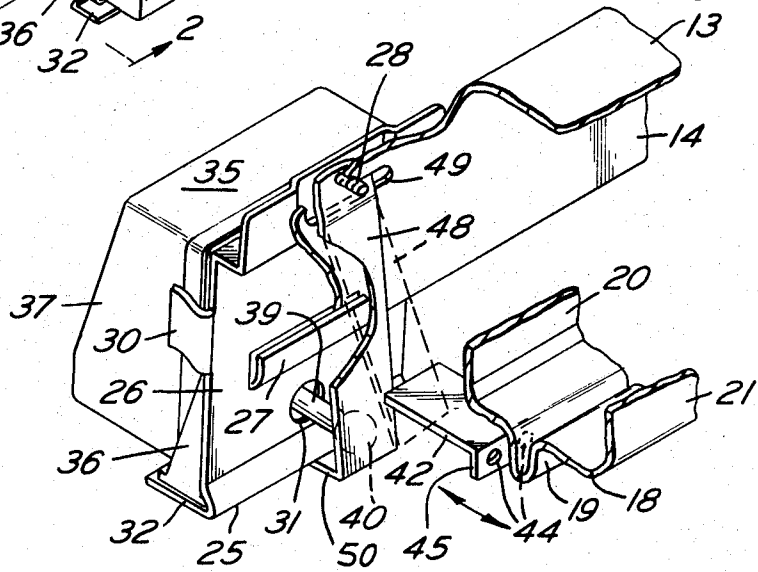
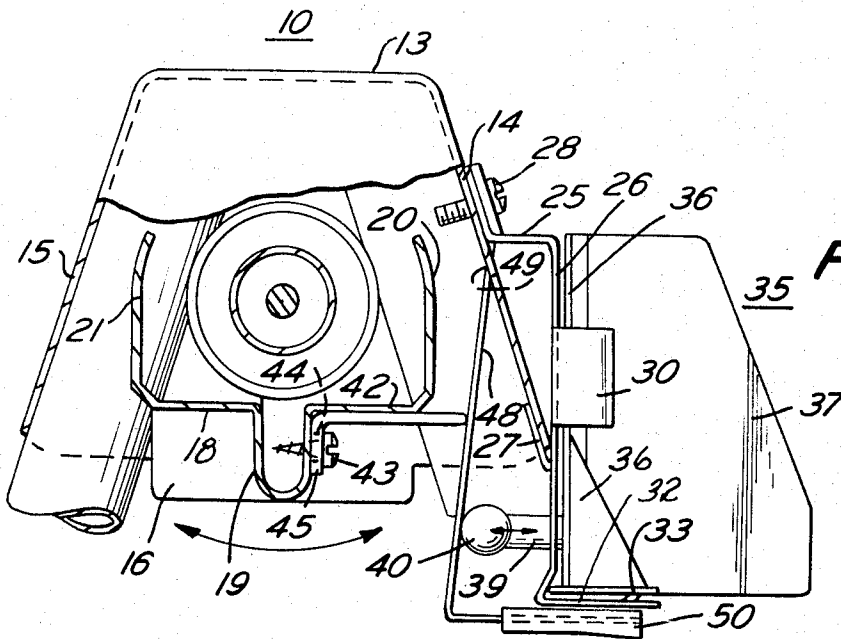


FIG. 2



SWING OPERATED MUSIC BOX

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to swing operated music boxes.

2. Description of the Prior Art

It has heretofore been proposed to provide spring motor driven cradles and swings. One such swing is shown in the U.S. Pat. No. 2,807,309 to Saint, et al., and improvements thereon are shown in U.S. Pat. No. 3,059,725.

It has heretofore been proposed to utilize a music box with a rocking chair where the music box is actuated in successive short periods by successive short linear power inputs.

No suitable and satisfactory provisions have heretofore been made for actuating a music box from spring motor driven swings.

SUMMARY OF THE INVENTION

In accordance with the invention, a swing operated music box is provided in which operating and control mechanism is provided interposed between the music box which is carried on a fixed part of the swing and a reciprocating part of the swing, the mechanism including a resilient lever swingably and pivotally mounted on a fixed part of the swing and engageable by a force bar on the reciprocating part of the swing to engage the lever to move a winding bar of the music box.

It is the principal object of the invention to provide a swing operated music box in which simple but effective mechanism is provided for optionally operating the music box.

It is a further object of the invention to provide a swing operated music box which can be readily utilized on swings now in use as well as for factory installation.

Other objects and advantageous features of the invention will be apparent from the description and claims.

BRIEF DESCRIPTION OF THE DRAWINGS

The nature and characteristic features of the invention will be more readily understood from the following description taken in connection with the accompanying drawings, forming part thereof:

FIG. 1 is a view in perspective of the canopy of the swing with the music box mounted thereon;

FIG. 2 is a fragmentary sectional view taken approximately on the line 2—2 of FIG. 1; and

FIG. 3 is a fragmentary perspective view of a part of a swing with the music box and its operating mechanism, parts being broken away showing the details of construction.

It should, of course, be understood that the description and drawings herein are illustrative merely and that various modifications and changes can be made in the structure disclosed without departing from the spirit of the invention.

Like numerals refer to like parts throughout the several views.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now more particularly to the drawings, a canopy 10 of a swing is shown supported by pairs of diverging legs 11 at each end. The canopy 10 is closed at

its ends by end caps 12 and has a top wall portion 13 and integral inclined front and rear walls 14 and 15.

The canopy 10 has carried therein a cradle frame 16, supported on a shaft 17 in a well known manner, the frame 16 being reciprocated by a motor spring with escapement (not shown). The cradle frame 16 has a bottom wall 18 which may include a central longitudinally downwardly projecting V-shaped rim 19 for stiffening and preferably includes upwardly extending front and rear wall portions 20 and 21 to prevent interior access which might result in pinching of the fingers of the user. The cradle frame 16 can serve in the customary manner for support of a swing seat or cradle (not shown).

The front wall 14 has a music box mounting frame 25, preferably made as a metal stamping, with a frame plate 26 held in place by a retaining tongue 27 which engages around the lower edge of the front wall 14 and extends upwardly along the interior of the front wall 14. The mounting frame 25 is held at the top by a screw 28 which extends through the front wall 14 in engagement therewith.

The music box mounting frame 25 has spaced spring fingers 30 extending from the sides of the frame plate 26. The frame plate 26 also has an opening 31 therethrough and a bottom shelf 32 with a gripping tongue 33.

The mounting frame 25 detachably receives a music box 35, the music box 35 having a base plate 36 with an enclosing dust cover 37 engaged thereon.

The music box 35 is held in place on the shelf 32 and against the frame plate 26 by engagement of the spring fingers 30 and the gripping tongue 33.

The music box 35 can be of well known type with a reciprocating winding rod 39 normally resiliently urged to its outer position and with enlarged or ball end 40. Reciprocation of the rod 39 is preferably effective for winding an internal operating spring (not shown) to actuate the drum for playing a tune. The winding is only for a short playing time interval of the order of one or two seconds so that repeated reciprocation of the rod 39 is required for continuity of play.

The cradle frame 16 has mounted thereon, and preferably on the front side of the rim 19, a forwardly extending horizontally disposed music box actuating bar 42 which can be held in place by screws 43 which extend through openings 44 in a vertical portion 45 of the bar 42.

A music box control lever 48 is provided which can be pivotally mounted at its upper end on the screw 28 and extends through a horizontally elongated slot 49 in the front wall 14 which slot limits sidewise swinging of the lever 48. The lever 48 has a forwardly extending handle portion 50 accessible below the shelf 32.

The lever 48 can be manually positioned by manipulation of the handle portion 50 to a vertical position where it is engaged by the actuating bar 42 upon reciprocatory movement to the right as seen in FIG. 2 of the cradle frame 16 and by its engagement with the ball 40, moves the rod 39 to the right for music box winding.

The lever 48 can also be swung to a position shown in broken lines in FIG. 3 where it is out of the path of movement of the actuating bar 42, and out of engagement with the ball 40 so that no winding movement is imparted to the rod 39.

With the cradle frame 16 rocking on the shaft 17 in a well known manner, if music box operation is desired, the lever 48 is positioned by the handle portion 50 to

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be in the path of movement of the actuating bar 42 and in engagement with the ball 40. As the cradle frame 16 swings the engagement of the lever 48 with the ball 40 is effective for moving the rod 39 to provide a short duration of winding movement for the music box 35.

Continued rocking of the cradle frame 16 is effective for providing repeated winding impulses to the music box for continuous operation.

I claim

1. A combination of a swing and a music box comprising: a swing having a fixed canopy supported by legs at each end;

a frame journaled in opposite ends of said canopy for reciprocating motion, said frame supporting a swing seat;

an actuating bar fixed to said frame;

a music box releasably mounted on said canopy, said music box having a reciprocatory winding rod biased to extend from said music box to a point adja-

cent said canopy;

and a control lever mounted by pivotally mounting means on said canopy and responsive to said actuating bar to move said winding rod and thereby wind said music box.

2. The combination of claim 1 wherein said pivotally mounting means further permits rotation of said control lever out of cooperative engagement with said actuating bar and said winding rod.

3. A swing operated music box as defined in claim 1 in which

said swing has a music box mounting frame for detachable support of said music box.

4. A swing operated music box as defined in claim 3 in which

said mounting frame includes a shelf portion and resilient portions for gripping engagement with said music box.

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