No. 695,689. Patented Mar. 18, 1902.

S. G. LEYSON.

TOY.

(Application filed Mar. 27, 1901.)

(No Model.)

Fig. 1.

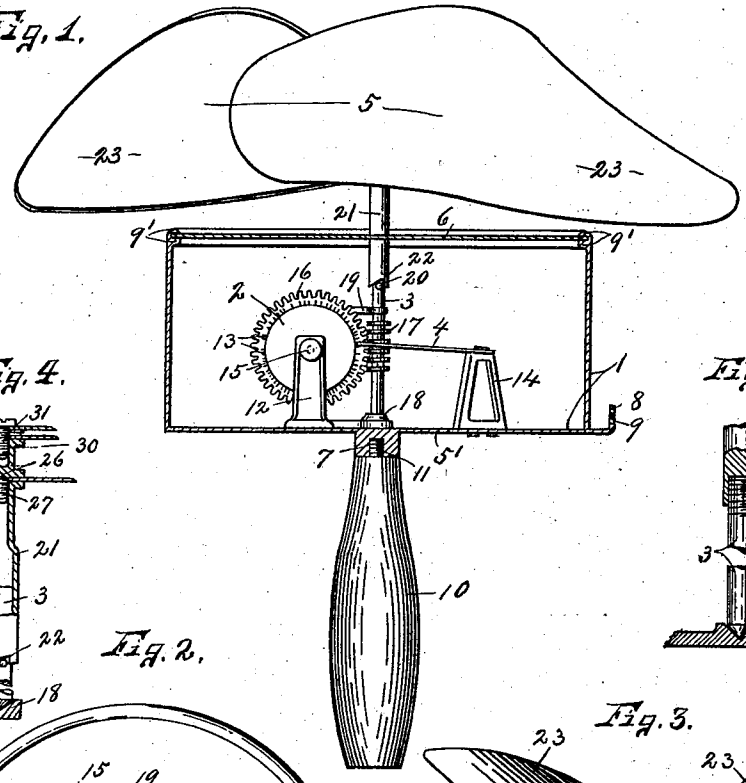


Fig. 4.

Fig. 6.

Fig. 2.

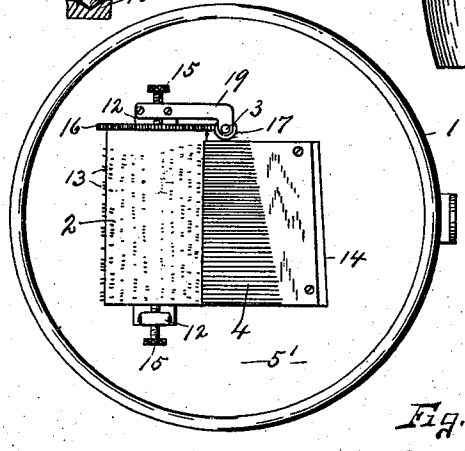


Fig. 3.

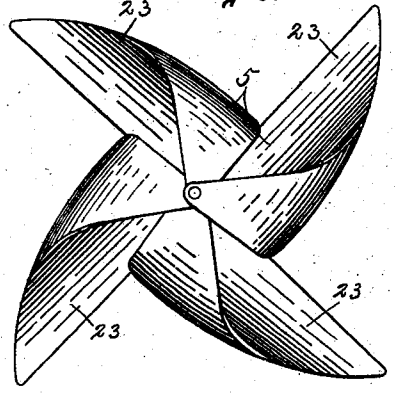
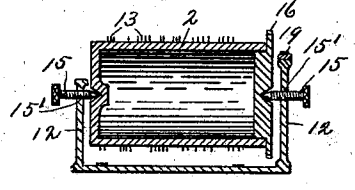


Fig. 5.



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SPECIFICATION forming part of Letters Patent No. 695,689, dated March 18, 1902.

Application filed March 27, 1901. Serial No. 53,065. (No model.)

To all whom it may concern:

Be it known that I, SACKVILLE G. LEYSON, of Solvay, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Toys, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to improvements in music toys.

The object of this invention is to produce a simple and practical toy in which a suitable toothed drum is rotated in contact with a series of vibrating fingers by an air-actuated motor.

A further object of my invention is to so construct and arrange the parts thereof that the music-box may be carried in the hand or attached to a bicycle or even hung upon a suitable support where the motion of the air operates upon the wings of a suitable fly to rotate the drum of a music-box.

A still further object of my invention is to provide means whereby the leaves or wings of the fly may be readily secured in operative position, or removed therefrom, if desired.

To this end the invention consists in the combination, construction, and arrangement of the parts of a music toy, as hereinafter fully described, and pointed out in the claims.

Referring to the drawings, Figure 1 is an elevation, partly in section, of my invention. Fig. 2 is a top plan of the detached music-box, the transparent wall being removed for disclosing the interior mechanism. Fig. 3 is a plan view of the detached fly, showing the wings in their assembled position. Fig. 4 is a vertical section through the upper end of the fly-supporting sleeve and the adjacent portion of the spindle for supporting the same. Fig. 5 is a longitudinal sectional view through the music-drum, showing the means for securing the same in position. Fig. 6 is an elevation, partly broken away and partly in section, of a modified form of fly-supporting spindle.

Similar reference characters indicate corresponding parts in all the views.

As seen in the drawings, this invention consists of an inclosed case 1 of a music-box, a cylinder 2, a rotary spindle 3, a series of vibrating arms 4, and a fly 5. The inclosed case 1 is preferably cylindrical in form, being provided with a fixed end wall 5′ and an opposite transparent end wall 6, the bottom wall 5′ being provided with a threaded aperture 7 and an extension 8, having an aperture 9, by means of which the inclosing case may be fastened to or suspended from a hook or any other desired fixed support or may be attached to a bicycle-frame or other moving vehicle. The transparent end wall 6 is preferably formed of celluloid or other similar transparent flexible substance, is removably supported between suitable flanges 9′, and is formed with an aperture for receiving a supporting-sleeve of the fly, presently described.

10 represents a handle having a threaded shank 11, which engages the threaded aperture 7 and detachably secures the handle to the frame 1. It is evident, however, that this handle may be secured in any other desired manner to the frame, either to the bottom or side walls thereof, and that the extension 8 may be otherwise formed and arranged without departing from the spirit of my invention.

The drum 2 is revolubly supported upon suitable brackets 12 and consists of an ordinary hollow cylinder having a series of projecting teeth 13, movable into engagement with the vibrating arms 4, which are, as usual, formed of unequal length for producing different tones, said vibrating arms being mounted upon a bracket 14. These brackets 12 and 14 are usually mounted upon the bottom wall 5′ of the frame 1; but it is evident that the cylinder 2 and arms 4 may be otherwise supported, if desired.

In order to permit the removal of the drum 2, I preferably mount the same upon screw-threader trunnions 15, which are engaged with the threaded apertures 15′ in the brackets 12, and one or both of said screws may be readily removed and the drum withdrawn when desired to insert another drum for producing a different musical composition. This drum 2 is also provided with a gear 16, concentric with its axis and arranged to mesh with a worm 17 upon the spindle 3. This spindle 3 is usually arranged upright, its lower end being stepped in a suitable bearing 18, secured to the bottom wall 5′, and its upper

portion is journaled in an arm 19, projecting from one of the brackets 12, said upper end being also provided with a transverse pin or shoulder 20 for a purpose hereinafter described.

Mounted upon the spindle 3 is a sleeve 21, having its lower end provided with one or more teeth 22, which are adapted to engage the shoulder 20, whereby when the sleeve is rotated motion is transmitted to the spindle and worm for rotating the drum 2, it being understood that the lower end face of said sleeve loosely rests upon the pin and that the spindle extends upwardly into said sleeve a sufficient distance to support the sleeve from lateral displacement.

The fly 5 usually consists of a celluloid body cut inwardly from its peripheral edges in substantially radial lines for forming suitable wings 23, portions of which are folded inwardly, as seen in Fig. 3, with their ends lapped upon each other in the usual manner and provided with apertures alined with each other and with a similar aperture in the base of the fly for receiving clamping means, presently described. This clamping means usually consists of the upper portion of the sleeve 21, which is provided with an annular flange 24 and a threaded socket 25, in which is movable a clamping member 26, having a threaded shank 27 at its lower end engaging with a threaded socket 25, and also formed with a flange 28, the upper end of said clamping member 26 being provided with an additional flange 29 and a threaded socket 30. The lower perforated wall of the fly 5 is placed upon the upper end of the sleeve 21, and the clamping member 26 is then placed in position with the threaded shank 27 registering with the aperture of the base of the fly and also the threaded socket 25. It is apparent that the lower wall of said fly is impinged between the flanges 24 and 28 and firmly holds the lower portion of the fly in position. When the ends of the wings 23 are folded inwardly in the manner seen in Fig. 3, with their apertures registering with each other, a suitable clamping-screw 31 is inserted through said apertures and engaged with the threaded socket in the upper end of the clamping member 26, said screw 31 being provided with a head for engaging the upper face of the adjacent portion of the fly, and thereby impinging the inwardly-folded ends of the fly between the flange 29 and the head of the screw 31.

It is evident from the foregoing description that when desired to remove the fly for the purpose of replacing it with a smaller or larger one it is only necessary to remove the screw 31 and clamping member 26, whereupon the fly may be readily removed.

In the operation of my invention the device is carried in the hand and moved against the air which impinges against the wings of the fly, and thereby rotates the spindle 3 for operating the drum 2, which is adapted to produce music by contact with the vibrating arms 4.

The operation of my invention will now be readily understood upon reference to the foregoing description and the accompanying drawings.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a musical toy, the combination with a casing, a toothed drum mounted for rotation in the casing, and vibrating fingers in the path of the drum, of a spindle journaled in the casing, means carried by the spindle to rotate the drum, a sleeve connected to the spindle, a clamping member engaging the top of the sleeve and having a threaded shank engaging in the sleeve, and a series of wings having their lower portions secured between the top of the sleeve and the clamping member, and means carried by the clamping member for securing the ends of the wings thereto, substantially as described.

2. In a musical toy, the combination with a casing having a transparent wall, a removable toothed drum rotatably mounted in said casing, a bracket rigidly secured in said casing, vibrating fingers secured upon said bracket engaging said toothed drum, of a spindle journaled in said casing, means carried by the spindle to rotate said drum, a sleeve connected to said spindle, a clamp carried by said sleeve, wings engaging said clamp and sleeve, and means carried by the clamp for securing the ends of the wings, and a removable handle, all parts being arranged and operating substantially as described and for the purpose set forth.

In witness whereof I have hereunto set my hand this 11th day of March, 1901.

SACKVILLE G. LEYSON.

Witnesses:
H. E. CHASE,
MILDRED M. NOTT.