

No. 774,920.

PATENTED NOV. 15, 1904.

L. PEROTTI.  
MUSIC BOX.

APPLICATION FILED SEPT. 1, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

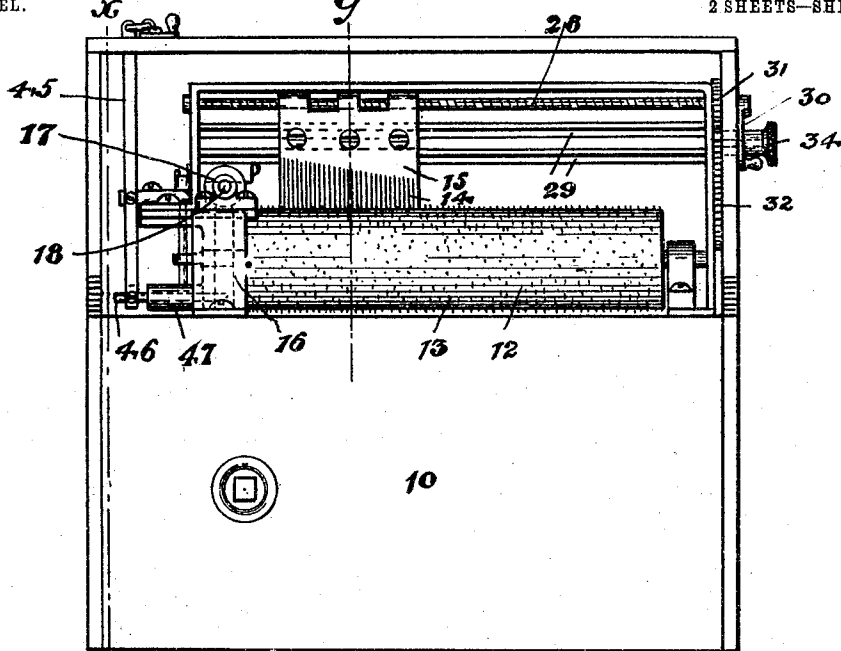


Fig. 1.

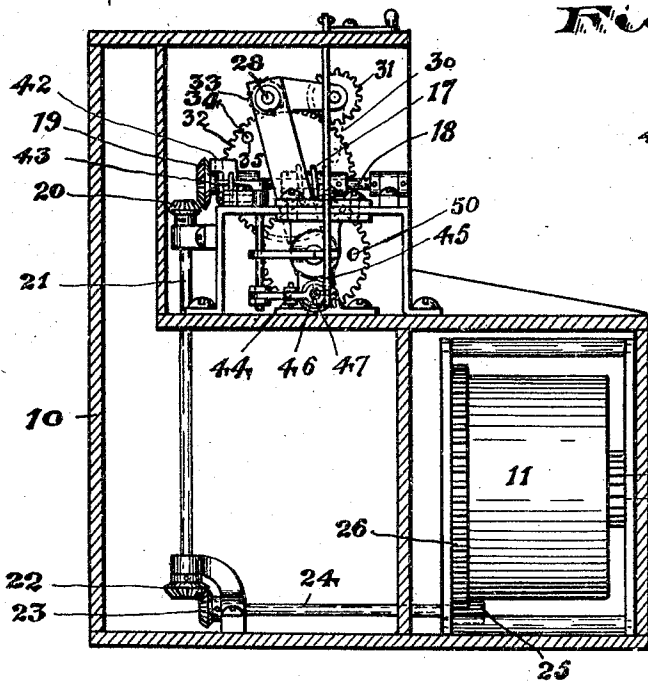


Fig. 2.

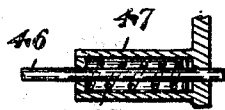


Fig. 3.

WITNESSES:

Ralph Lancaster.

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2 SHEETS—SHEET 2

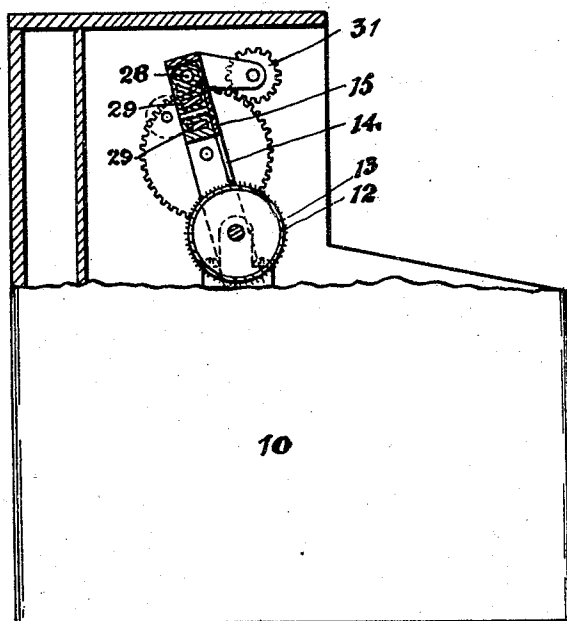


Fig. 4.

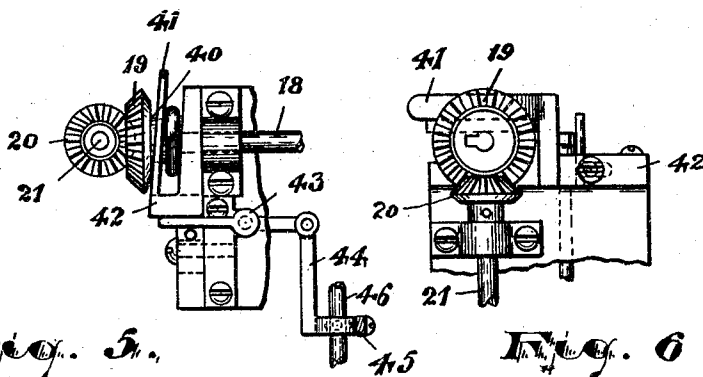


Fig. 5.

Fig. 6

WITNESSES:

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## UNITED STATES PATENT OFFICE.

LOUIS PEROTTI, OF NEWARK, NEW JERSEY.

## MUSIC-BOX.

SPECIFICATION forming part of Letters Patent No. 774,920, dated November 15, 1904.

Application filed September 1, 1903. Serial No. 171,488. (No model.)

*To all whom it may concern:*

Be it known that I, LOUIS PEROTTI, a subject of the King of Italy, residing at Newark, in the county of Essex and State of New Jersey, have invented and produced new and original Improvements in Music-Boxes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to figures of reference marked thereon, which form a part of this specification.

The objects of this invention are to enable a greater variety of tunes to be secured from each machine, to secure more distinct and melodious musical notes or sounds, and to secure other advantages and results, some of which may be referred to hereinafter in connection with the description of the working parts.

The invention consists in the improved music-box and in the arrangements and combinations of parts of the same, all substantially as will be hereinafter set forth, and finally embraced in the clauses of the claim.

Referring to the accompanying drawings, in which like figures of reference indicate corresponding parts in each of the several figures, Figure 1 is a front elevation of the improved music-box. Fig. 2 is a section of the same, taken at line *x*. Fig. 3 is a detail section of a certain stay or stop. Fig. 4 is a section taken at line *y*, Fig. 1; and Figs. 5 and 6 show means for throwing the device out of operative relation to its motor, as will be hereinafter more fully described.

In said drawings, 10 indicates a suitable box or case adapted to contain the motor 11 and the music-producing devices adapted to be operated by said motor. Of said music-producing devices, 12 indicates a cylinder having on its periphery the usual pins 13, adapted to engage the resonant teeth or tongues 14 of the comb-like sound-producing plate 15. Said cylinder 12 is adapted to rotate on its axis, but has no longitudinal movement.

At one end of said cylinder 12 is a toothed wheel 16, adapted to engage a screw-wheel 17 on a shaft 18, the said shaft having at one end a beveled gear-wheel 19, Fig. 2, adapted to

engage a second beveled wheel, 20, on a vertical shaft 21, which extends to the bottom of the box, where it is provided with another beveled gear-wheel, 22, which engages a beveled gear-wheel, 23, on a horizontal shaft 24, having a pinion 25. This last meshes with a gear-wheel 26, immediately in connection with the motor, as shown in Fig. 2. The operation of the parts thus described is such as to transmit power to the cylinder to effect a slow rotary movement of the same to secure the desired engagement of the pins with the teeth or tongues 14.

To secure the desired variety of tunes and to obtain a greater variety than has heretofore been secured from music-boxes having the cylinders movable lengthwise of their axes, I have made the said comb-like plate 15 movable lengthwise of said axes, and with this in view I have arranged said comb-like plate 15 on a screw-shaft 28, Fig. 1, and slide-ways 29, running parallel with said axis of the said cylinder 12, and thus by turning said screw-shaft the requisite distances the cylinder may be adjusted to produce the different tunes. Said screw-shaft 28 is turned by a hand-crank 30 on the outside of the case or box and having a pinion 31, which meshes with a cog-wheel 32, which in turn transmits motion to another pinion, 33, at one end of the screw-shaft and by which last the screw-shaft is turned.

To regulate the distances of movement of the comb-plate, I have provided a suitable stop-plunger 34, the inner end of which will enter a hole or holes 35, preferably in the larger cog-wheel 32.

To disengage the cylinder 12 from operative connection with the motor, so that the music may be quickly stopped at will, I have arranged the gear-wheels 19 20 so that they may be thrown out of meshing relation, as shown in Figs. 5 and 6 more clearly, thus enabling the motor to continue its working independent of the music-producing means—for cradle-rocking purposes, for example, as described in a contemporaneous application. The gear-wheel 19 is adapted to slide a limited distance lengthwise of its shaft 18, so as to be disengaged from the gear-wheel 20, and is

back from the cogs or teeth thereof peripherally grooved, as at 40, to receive an inclined arm 41 of a sliding piece 42, adapted to be operated by any suitable train of levers or devices either automatically or by hand, as may be desired.

I prefer when disconnecting the gear-wheels to stop the cylinder, and to this end the gear-wheel sliding means are connected or in train with means for stopping the cylinder, as follows: The lever 43, fulcrumed near said sliding piece 42, is in turn operated by a second lever, 45, and connected to the first said lever by a pivoted link or connecting-rod 44. Said second lever is also loosely connected to a stop-plunger 46, which extends through a cylindrical receptacle 47, containing a spring 48, and at its end distant from the lever is adapted to enter a hole 50 in the cog-wheel of the cylinder to stop the same from rotating. Suitable means may be provided, especially when the device is detached from other means to be operated, such as the cradle referred to in my contemporaneous application, for stopping the independently-operable motor when the music-cylinder has been stopped.

I am aware that various changes may be made in the arrangements and operations of parts without departing from the spirit or scope of the invention, and I do not wish to be understood as limiting myself by all the positive descriptive terms employed in the foregoing specification, excepting as the state of the art may require.

Having thus described the invention, what I claim as new is—

1. The improved music-box, containing therein a rotary cylinder having peripheral pins, and a movable comb-like resonant plate, the tongues of which are engaged by peripheral pins, and means for moving said comb-like plate lengthwise of the axis of said cylinder, substantially as set forth.

2. The improved music-box, containing therein a rotary cylinder having peripheral pins, and a movable comb-like resonant plate, the tongues of which are engaged by said peripheral pins, and a screw-shaft for moving said plate lengthwise of the axis of said cylinder, substantially as set forth.

3. The improved music-box, containing therein a rotary cylinder having peripheral pins, and a movable comb-like resonant plate, the tongues of which are engaged by said peripheral pins, a slideway for said comb-like plate and a screw-shaft, parallel with said slideway and the axis of said cylinder, substantially as set forth.

4. In a music-box, the combination with the cylinder and peripheral pins and a motor for operating said cylinder, of a sliding plate having resonant tongues, means for moving said plate lengthwise of the axis of the cylinder and means for disengaging the motor from the cylinder and permitting independent operation of the said motor, substantially as set forth.

5. In a music-box, the combination with the cylinder and peripheral pins and a motor for operating said cylinder, of a sliding plate having resonant tongues, means for moving said plate lengthwise of the axis of the cylinder, and a sliding inclined arm adapted to disconnect the motor from the cylinder and prevent a transmission of power, and levers for operating said inclined arm, substantially as set forth.

6. In a music-box, the combination with the cylinder having peripheral pins, a motor connected to said cylinder by a train of gearing including a pair of beveled gear-wheels, one of said beveled gear-wheels having a peripheral groove, an inclined sliding arm arranged in said groove and adapted to move said grooved gear-wheel from and toward its cooperating gear-wheel, means for sliding said inclined arm on its bearings, a comb-like plate movable lengthwise of the axis of said cylinder, means for moving said comb-like plate and means for stopping the movement of said comb-like plate at a definite relative position respecting the cylinder, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 26th day of August, 1903.

LOUIS PEROTTI.

Witnesses:

CHARLES H. PELL,  
M. V. DOYLE.