Nov. 27, 1934. L. R. KELLER 1,982,522

MUSICAL TOY

Filed July 3, 1934

Fig. 1.

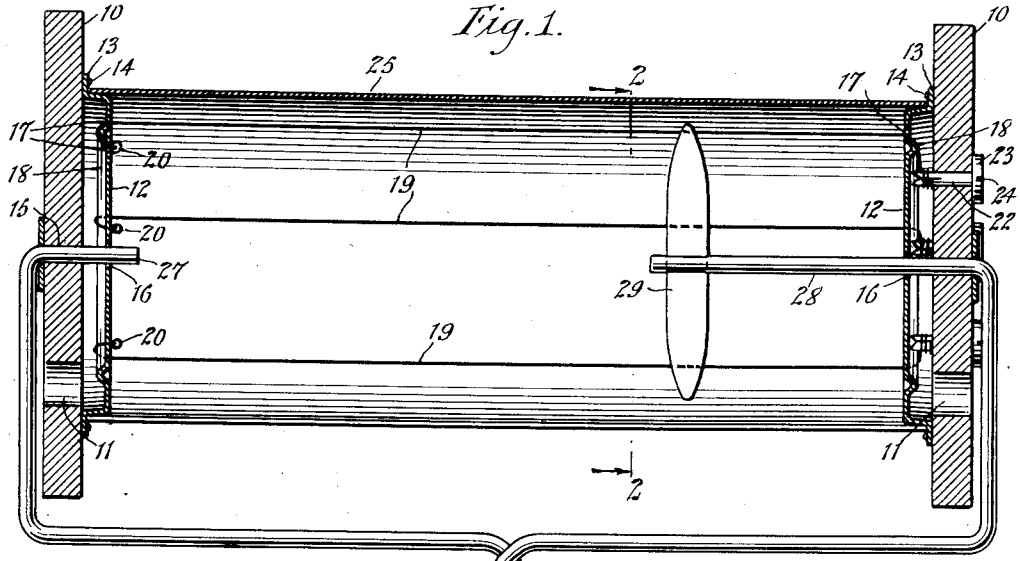


Fig. 2.

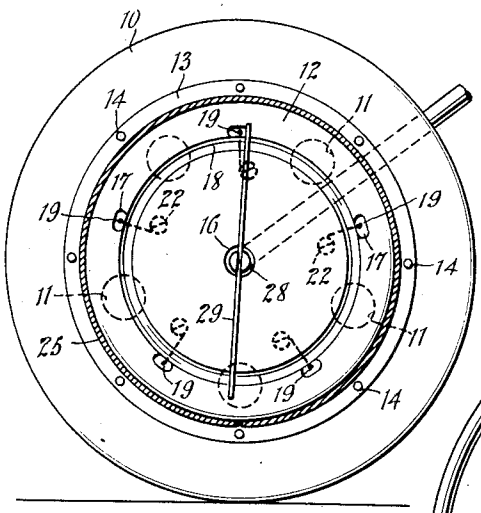




Fig. 3.

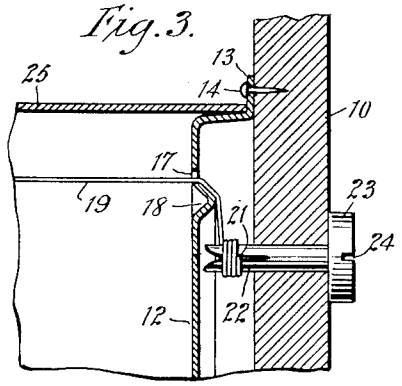
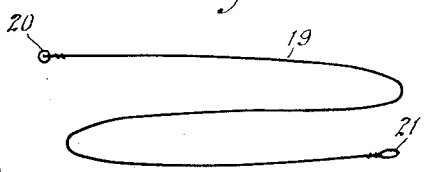


Fig. 4.



WITNESSES

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MUSICAL TOY

Lewis R. Keller, New York, N. Y.

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8 Claims. (Cl. 46—47)

This invention relates to a musical toy for children which is designed and adapted to be pushed in rolling contact with a floor or pavement to produce music, tunes or ditties.

An object of the invention is the provision of a device of the indicated character which will be simple and inexpensive of construction, yet of effectual and substantial design.

Another object is the provision of means in a device of the character mentioned by which the musical tones and tunes may be varied and changed at will by simple manipulations.

With the foregoing, other objects of the invention will appear from the embodiment of the invention, which by way of example, is described in the following specification and illustrated in the accompanying drawing, in which

Figure 1 is a section through a toy embodying the features of the invention;

Fig. 2 is a transverse section on the line 2—2 of Fig. 1;

Fig. 3 is an enlarged fragmentary detail section;

Fig. 4 is a view of one of the strings.

Referring now more particularly to the several views of the drawing, it will be apparent that the device includes two wheels or traction rollers 10, which may be made of any suitable material, the same being made of wood in the present instance and each being in the form of a disk and provided with a plurality of sound openings 11. Use is made of two cupped disks of metal 12, each of which has a circumferential flange 13. One of the disks 12 is secured to each of the rollers 10 on the inside thereof by suitable fastening elements 14, such as pegs or nails, which pass through the flange and are driven into the roller 10. The disk 12 is arranged concentrically with respect to the roller and is smaller in diameter than the roller. Each of the rollers 10 and the disk 12 secured thereto has axially alined holes 15 and 16 therein, respectively, for a purpose to appear. Each of the disks 12 has a plurality of holes 17 therein spaced equidistantly, there being five holes in the present instance. Each disk also has a circular ridge 18, or in lieu of this ridge 18 there may be provided a plurality of protuberances adjacent the holes 17, respectively. Use is made of musical strings 19, which may be of wire or catgut, or any other kind of strings which will produce musical tones when vibrated. There are five strings 19 in the present instance according to the number of holes 17 in the disks 12, one of the strings being shown in Fig. 4. Each string 19 has a steel bead 20 on one end and a loop 21 on its opposite end. One of the rollers 10 has five winding keys 22 to correspond to the number of strings 19. Each of the keys is in the form of a split rivet or the like and its head 23 having a kerf 24. The head 23 of each key is disposed on the outside of the roller 10 with the split end protruding beyond the inner face of the roller, as shown most clearly in Fig. 3. The strings 19 are stretched or extend between the disks 12. Each string 19 passes through the hole 17 in the left-hand disk 12, and its steel bead 20 is disposed in contact with the inside face of this disk while the string is bent around the ridge 18 which serves as a bridge. The other end of the string 19 is passed through one of the holes 17 in the right-hand disk 12 and is bent around the ridge 18 which also serves as a bridge, and the loop at this end of the string 19 is engaged with the adjacent key 22. Thus the strings 19 are stretched or extend between the disks 12, and these strings may be tuned by means of the keys 22, which may be rotated by a suitable instrument entered in the kerf 24 of each key.

Use is made of a piece of resonant material, such as cardboard or pressed paper or fiber, cut to the desired size to form a tube or drum 25 whose opposite ends are glued or fastened, respectively, to the disks 12 to constitute with the disks 12, a sound-box. In this connection it is to be understood that each of the disks 12 is resonant, and will give to the strings 19 connected therewith, added vibration, resonance, and musical tone and carry the same to the space between the disks and the rollers 10, the sounds passing through the sound openings 11. The tube 25 as secured to the disks serves to maintain the disks 12 and rollers 10 connected therewith in the proper spaced relationship, and to make it possible to obtain the desired tuning tension of the strings 19. The tube 25 also serves to enclose the strings 19, thereby giving added tone and resonance. Use is made of a suitable handle connected with the rotatable structure including the sound-box and strings 19 hereinbefore described, to push the same with the rollers 10 in contact with a floor or pavement to cause rotational movement of the sound-box. The handle 26 in the present instance consists of a single piece of stout wire which is bent upon itself to provide two end portions 27 and 28, respectively, which are engaged, respectively, in the alined holes 15 and 16 of the rollers 10 and disks 12. The said portions 27 and 28 constitute trunnions on which the rollers 10 and the sound-box supported thereby rotate.

In order to vibrate the strings 19 to produce a series of tunes or ditties as the strings move with the sound-box in the rotation of the latter, there is provided means in the form of a celluloid pick 29, or the like, which is connected with the end portion 28 of the handle and is disposed within the sound-box. It is to be understood that the pick can be made either to vibrate single or double. In the present instance one end of the pick 29 vibrates one string and immediately thereafter the other end of the pick vibrates another string in the rotation of the sound box. By using an odd or uneven number of strings and by using a double pick, as illustrated, it is possible to obtain a maximum amount of tunes or ditties, since the pick vibrates the strings alternately giving three strings six tones or musical notes on one revolution, or, in other words, the five strings give the effect of ten notes or musical tones. By turning the keys 22, the strings 19 may be tuned to obtain a wide range of tones on each string, and thereby making it possible to produce a wide range of tunes or musical sounds.

I claim:

1. A musical toy comprising a rotatable sound-box, musical strings engaged with and extending within said sound-box, means engaged with the strings to tune them, and means within said sound-box to pick the strings as the sound-box is being rotated, to produce musical sounds.

2. A musical toy comprising a sound-box, musical strings engaged with and extending within said sound-box, traction rollers on said sound box, a handle connected with said sound-box to rotate it while said rollers are in contact with a suitable surface, tuning means for the strings projecting exteriorly through one of said rollers, and means secured to a portion of said handle and arranged within said sound-box, to pick the strings as the sound-box is being rotated, to produce musical sounds.

3. A musical toy including a sound-box consisting of a tubular member and end members closing the opposite ends of the tubular member, all of said members being made of resonant material, musical strings stretched between the end members within the tubular member, means for tuning said strings, and means within the sound-box to pick the strings to produce musical sounds.

4. A musical toy including traction rollers, resonant end members secured to said rollers respectively, a resonant tube having its opposite ends engaged with said end members respectively, said end members and the tube constituting a sound-box, tuning keys carried by one of said rollers, musical strings, each of which has one end secured to one of said end members and extending within the sound-box in contact with the other end member and its other end connected with one of said keys, and means within said sound-box to vibrate said strings as the sound-box is caused to rotate with said rollers.

5. A musical toy including a rotatable structure having a sound-box, musical strings connected with and extending within said sound-box in spaced relation with respect to each other about the axis of rotation of said sound-box, parallel to said axis, means carried by said structure connected with said strings to tune them, and picking means within said sound-box extending radially from said axis to pick one string at a time as the structure rotates.

6. A musical toy including disk traction rollers, cupped resonant end members secured to said rollers respectively and forming chambers therewith between the rollers and end members, said rollers having sound openings therein communicating with said chambers, musical strings stretched between said end members in engagement therewith, one end of each string extending into one of said chambers, a key extending through the roller adjacent the last-mentioned chamber and engageable with each string to tune the string, means to vibrate said strings as the end members are caused to rotate with said rollers, and a resonant part connected with said end members and enclosing the vibratory portions of said strings and said last means.

7. A musical toy comprising a handle having means providing an axis, a structure rotatable on said means and which rotates in contact with a traction surface when a suitable pulling or pushing force is applied to said handle, means carried by said structure which produces musical sounds when vibrated, means carried by said structure to tune the second means, and means connected with said first-mentioned means to vibrate said second means.

8. A musical toy comprising traction rollers spaced with respect to each other, means connected with said rollers forming a sound-box rotatable therewith, musical strings engaged with and extending within said sound-box, one end of each string being disposed exteriorly of said sound-box, and means carried by one of said rollers and connected with said end of each string to tune said string, a handle providing an axis on which the rollers rotate, and means carried by the handle to vibrate said strings.

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