Nov. 29, 1927.

1,651,245

J. J. BECKER

SOUNDING TOY

Filed Feb. 23, 1927

2 Sheets-Sheet 1

Fig. 1.

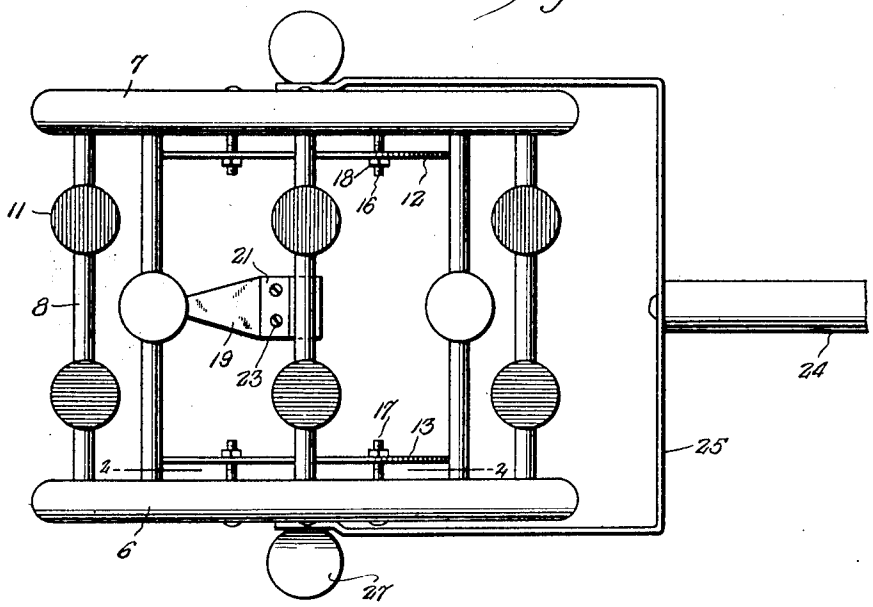


Fig. 2.

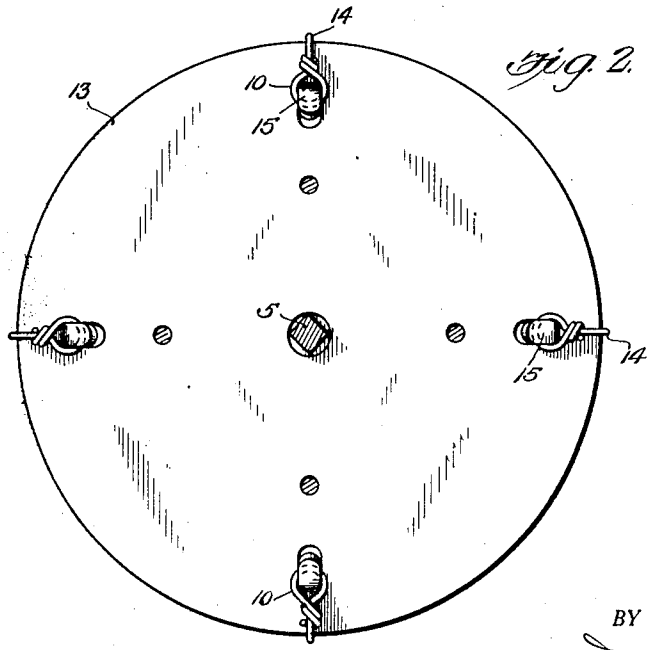
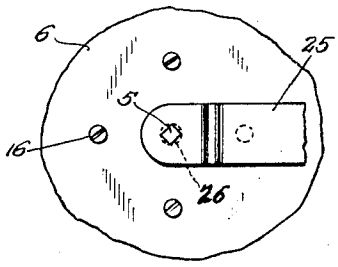


Fig. 3.



INVENTOR
J. J. Becker,
BY
ATTORNEY.

Nov. 29, 1927.

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Fig. 4.

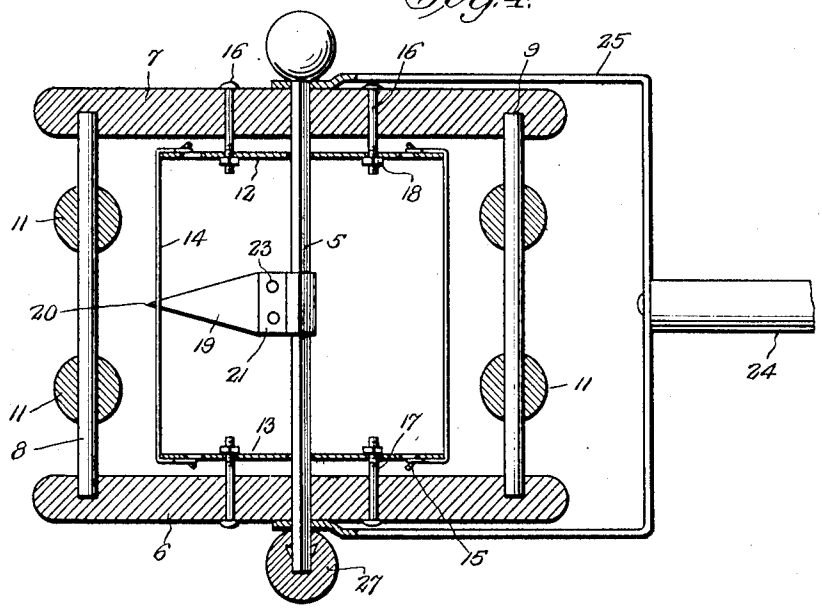
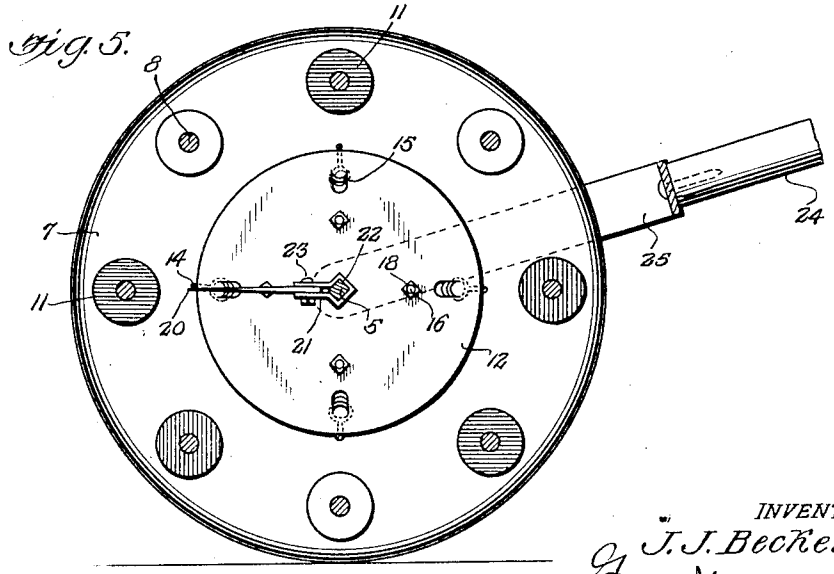


Fig. 5.



INVENTOR

J. J. Becker,

BY

ATTORNEY.

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UNITED STATES PATENT OFFICE.

JOHN J. BECKER, OF NEW YORK, N. Y.

SOUNDING TOY.

Application filed February 23, 1927. Serial No. 170,286.

This invention relates to sounding toys.

One object of the invention is to provide a simple, inexpensive and durable sounding toy embodying means for producing musical sounds when rolled over a floor or other surface.

Another object is to provide a toy for producing musical sounds when rolled over a floor or other surface wherein the musical strings are rotated successively into engagement with a fixed flexible picker or plectrum to provide for successive musical sounds.

A still further object of the invention resides in the provision of a toy having coacting devices for the production of musical sounds when the toy is rolled over a surface, and having a plurality of variously colored objects mounted thereon to be revolved outside of the field of operation of the music producing devices to create a pleasing variegated color scheme effect during the production of the musical sounds.

With the above and other objects in view, the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawing, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:

Figure 1 is a top plan view.

Figure 2 is a sectional view on the line 2—2 of Fig. 1.

Fig. 3 is a detail view showing the connection of the handle with the axle.

Fig. 4 is a horizontal sectional view.

Fig. 5 is a horizontal sectional view.

Referring now more particularly to the accompanying drawings, a non-rotatable axle is indicated by the reference character 5, and it is preferably square in cross section. Disk wheels 6 and 7 are rotatably mounted on the ends of the axle. These disk wheels are connected by the equi-distant spaced rods 8, 9 and 10 which maintain the disk wheels in parallelism. The ends of these rods are preferably fitted in sockets in the inner faces of the wheels, having tight fit therein, and held by this tight fitting connection or otherwise secured therein. Spherical or other shaped variously colored members 11 are secured, by a tight fit or otherwise, on the rods, and arranged in staggered relation, so that as the toy is pulled or pushed along over a floor or other surface, a pleasing color scheme effect is presented.

Musical string carrying disks 12 and 13, preferably of sheet metal, and smaller in diameter than the diameter of the wheels, loosely embrace the shaft within the disk wheels and are secured to the disk wheels 6 and 7, respectively, to rotate with the latter. The musical strings are indicated at 14 and are secured at their ends to the respective disks 12 and 13 by suitable fastenings. This fastening may be effected by "striking up" tongues from the sheet metal disks 12 and 13 to form hooks 15, and by forming a loop at each end of each string, the ends of the strings are readily looped over the hooks and thereby secured, the peripheries of the string carrying disks forming bridges for the strings.

One means for connecting the musical string carrying disks to the disk wheels so that they may be carried thereby, resides in a pair of headed screw threaded bolts 16 and 17, operating through suitable openings in the respective disk wheels 6 and 7 and through suitable openings in the string carrying disks 12 and 13, with nuts 18 located against the inner faces of the string carrying disks, and having working fit on the screw threaded bolts, as shown. By manipulation of the nuts 18 on the bolts the disk wheels are adjustably supported, and this provides also for an adjustment to effect tensioning of the strings 14.

A picker or plectrum 19 is secured to the axle 5, in any suitable manner, and is composed of any suitable flexible material, such as thin sheet metal, celluloid or the like, and as shown, may be of triangular shape having converging sides, resulting in a point 20, disposed in a path for engagement by the strings 14 successively as the musical carrying disks are rotated and thereby set the strings in vibration and create a series of musical sounds as the wheeled toy is rolled along the floor or other surface. This picker or plectrum may be fixedly secured to the axle 5 in any suitable manner, but as shown, it is preferably secured between a pair of clamping plates 21 of sheet metal or other suitable material and having an-

gular recesses 22 to embrace the square axle and clamped to the latter in any desired manner but preferably by rivets 23, which also effect a clamping of the picker or plectrum between said plates. While the picker or plectrum is preferably flexible in nature, the supporting means therefor is preferably rigid.

To facilitate operation of the toy, I provide a handle 24 of a length suitable to permit the average child to push or pull the toy without stooping and this handle has arms 25 provided at their free ends with openings 26 to fit the arms over the ends of the axle where they may be held against disconnection from the axle by means of suitable devices, such as recessed spherical or other shaped wood elements driven onto the ends of the axle. The axle may have projections to bite into the wood to assist in effecting the connection.

It will thus be seen that I provide a wheeled toy embodying means for the production of musical sounds operated under the influence of a rolling motion of the device, and that outside of the field of the coacting musical sound producing elements, I provide colored objects arranged in such a manner as to be rotated in the direction of rotation of the wheels for the purpose of producing a variegated color scheme effect pleasing to the esthetic sense. The colored objects may be any suitable color, such as red, white and blue, or other colors may be included to provide the attractiveness desired.

What is claimed is:

1. In a device of the class described, an axle, wheels rotatable on the axle, movable means between the wheels for the support of musical strings secured to said supporting means, means connecting the wheels and the supporting means to mount the supporting means in spaced relation to the wheels and effect rotation of the string supporting means with said wheels and to move said string supporting means toward and away from said wheels to tension the strings, and a yieldable plectrum rigidly secured to the axle and having its outer end disposed for engagement by the musical strings successively to create musical sounds.

2. In a device of the class described, an axle, wheels rotatable on the axle, means between the wheels for the support of musical strings, musical strings secured to said supporting means, means connecting the wheels and the supporting means to mount the supporting means in spaced relation to the wheels and effect rotation of the string supporting means with said wheels, a plectrum secured to the axle and having its outer end disposed for engagement by the musical strings successively to create musical sounds, a plurality of rods extending between the wheels and connected at their ends to the latter and disposed between the axle and the periphery of the wheels and outside of the field of rotation of said strings and their supporting means, and a plurality of colored objects varying in color fixed on the rods in staggered relation, whereby upon travel of the device over a surface a changing and pleasing color scheme is given the device outside of the musical strings and their supporting means.

3. In a device of the character described, a nonrotatable axle, wheels rotatable on the ends of the axle, connecting members between the wheels near the peripheries of the wheels, sheet metal string carrying disks loosely embracing the axle in spaced relation to the wheels and having portions struck up therefrom to provide hooks on their outer faces, strings having looped ends secured to the respective hooks of the disks, the peripheries of the disks forming bridges for the strings, means to support the string carrying disks from said wheels, a plectrum carried by the axle for engagement by the strings successively to create musical sounds, said supporting means for the disks having threaded connection with the disks to provide for an adjustment of the disks to effect tensioning of the strings when desired.

4. In a device of the character described, a nonrotatable axle, disk wheels mounted on the axle, string carrying disks loosely embracing the axle and each having hooks on its outer face, means for adjustably connecting the string carrying disks to the wheels to rotate with the latter and to maintain the wheels and disks in spaced relation, and strings extended over the peripheries of the disks and having looped ends secured to the respective hooks of the disks whereby the peripheries of the disks form bridges for the strings, and whereby upon adjustment of the disks by said adjustable means the strings are tensioned, and a plectrum mounted on the axle for engagement by the strings successively as the device is rolled over a surface.

5. In a device of the character described, a non-rotatable axle, wheels mounted on the ends of the axle, string carrying disks of smaller diameter than the disk wheels arranged between the wheels, one disk adjacent each wheel, means for securing the disks to the wheels whereby to rotate the disks with the wheels, the disks having hooks on their outer faces, strings extended over the peripheries of the disks and connected at their ends to the hooks of the disks, and a plectrum mounted on the axle for engagement by the strings successively as the device is rolled over a surface.

6. In a device of the character described, a non-rotatable axle, wheels rotatable on the ends of the axle, musical sounding devices,

including movable parts, operatively mounted between the wheels for coaction to produce successive musical sounds as the device is rolled over a surface, and a plurality of spaced colored objects supported by said wheels to be carried thereby as the wheels are rotated and arranged outside of the field of rotation of the rotatable parts of the music producing devices, said objects being staggered and varying in color, whereby upon travel of the wheels over a surface, a pleasing variegated color scheme is created.

7. In a device of the character described, an axle, disk wheels mounted on the axle, string carrying disks of smaller diameter than the disk wheels loosely embracing the axle, one adjacent each disk wheel, means for adjustably connecting the string carrying disks to the disk wheels to rotate with the latter, strings arranged in parallelism and having their ends connected to the string carrying disks, and a flexible plectrum rigidly mounted on the axle for engagement by the strings successively as the device is rolled over a surface.

8. In a device of the character described, an axle, disk wheels mounted on the axle, string carrying disks of smaller diameter than the disk wheels loosely embracng the axle, one adjacent each disk wheel, means for adjustably connecting the string carrying disks to the disk wheels to rotate with the latter, strings arranged in parallelism and having their ends connected to the string carrying disks, a flexible plectrum rigidly mounted on the axle for engagement by the strings successively as the device is rolled over a surface, rods connecting the disk wheels near the peripheries of the latter, and elements mounted on said rods to provide enlargements thereon, the elements on one rod being staggered with relation to the elements on adjacent rods.

9. In a device of the character described, an axle, disk wheels on the axle, string carrying disks of smaller diameter than the disk wheels loosely embracng the axle, one adjacent each disk wheel, strings having their ends connected to the string carrying disks, screw threaded bolts passed through the disk wheels and the respective adjacent string carrying disk, nuts having working fit on the screw threaded bolts and disposed adjacent the inner faces of the respective string carrying disks whereby to adjustably secure the latter to the disk wheels and to tension said strings, a plectrum secured to the axle for engagement by the strings successively as the device is rolled along a surface, and a handle connected to the axle.

10. In a device of the character described, an axle, disk wheels on the axle, string carrying disks of smaller diameter than the disk wheels loosely embracing the axle, one adjacent each disk wheel, means for adjustably connecting the string carrying disks to the disk wheels to rotate with the latter, strings arranged in parallelism and having their ends connected to the string carrying disks, a flexible plectrum rigidly mounted on the axle for engagement by the strings successively as the device is rolled over a surface, rods connecting the disk wheels near the peripheries of the latter, and a handle connected to the axle.

11. In a device of the character described, an axle, disk wheels on the axle, string carrying disks of smaller diameter than the disk wheels loosely embracing the axle, one adjacent each disk wheel, strings having their ends connected to the string carrying disks, screw threaded bolts passed through the disk wheels and the respective adjacent string carrying disk, nuts having working fit on the screw threaded bolts and disposed adjacent the inner faces of the respective string carrying disks whereby to adjustably secure the latter to the disk wheels and to tension said strings, a plectrum secured to the axle for engagement by the strings successively as the devce is rolled along a surface, rods connecting the disk wheels, and located between the strings and the peripheries of the disk wheels, colored spherically shaped elements fixedly secured on said rods, the elements on the rods being arranged in staggered relation, and a handle connected to the axle.

In testimony whereof I have hereunto set my hand.

JOHN J. BECKER.