No. 742,194. PATENTED OCT. 27, 1903.

G. A. JOHNSON.

TOY.

APPLICATION FILED NOV. 28, 1902.

NO MODEL.

Fig. 1

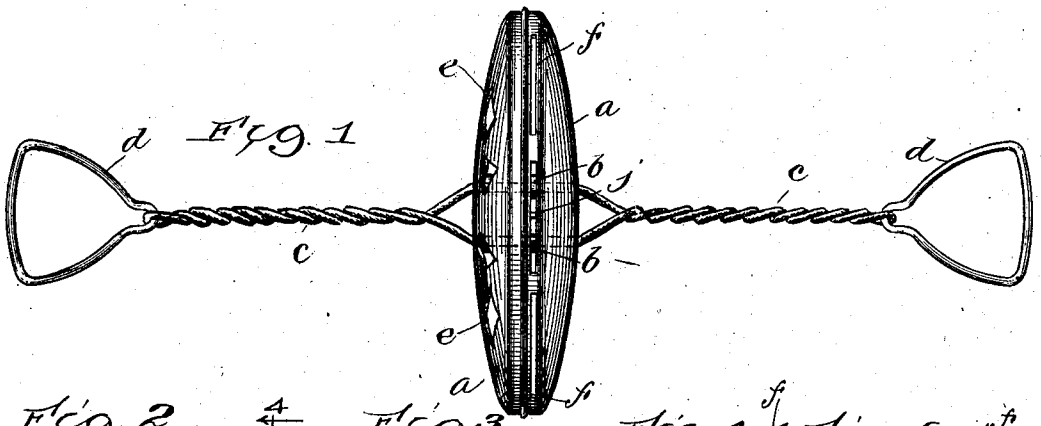


Fig. 2.

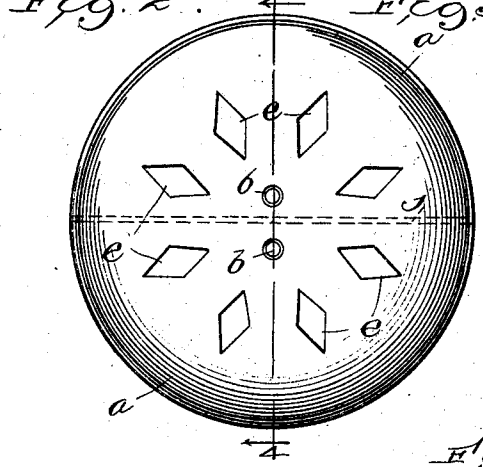


Fig. 3.

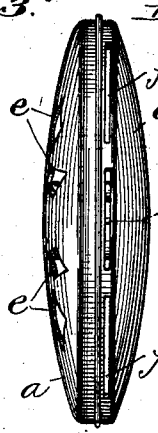


Fig. 4

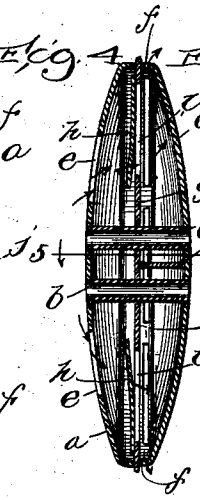


Fig. 5.

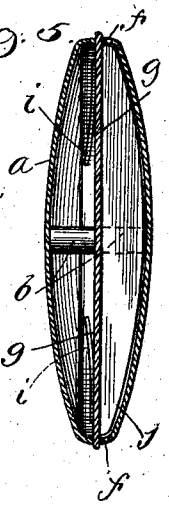


Fig. 6.

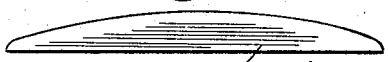


Fig. 7.

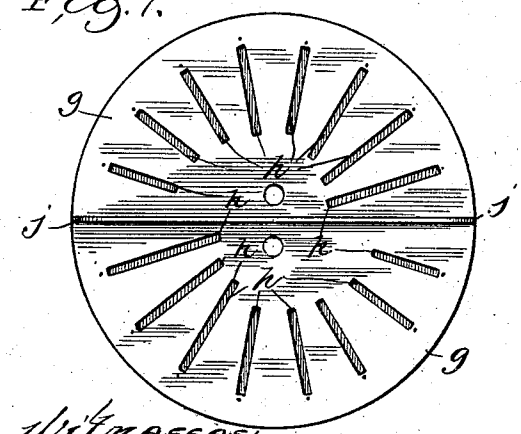
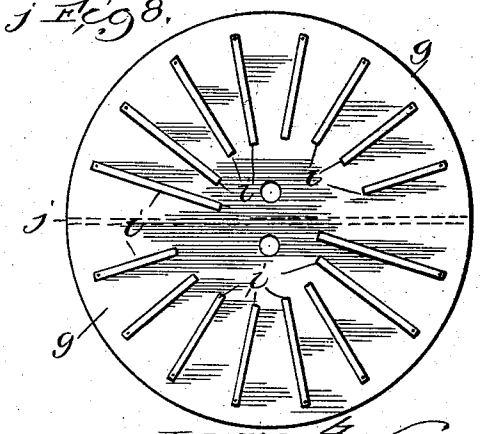


Fig. 8.



Witnesses:
Harry D. Leslie.
Ray White.

Inventor:
George A. Johnson.
By Howard M. Cox Atty.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 742,194. Patented October 27, 1903.

UNITED STATES PATENT OFFICE.

GEORGE A. JOHNSON, OF PARKRIDGE, ILLINOIS, ASSIGNOR OF ONE-HALF TO HOWARD H. HARRIES, OF CHICAGO, ILLINOIS.

TOY.

SPECIFICATION forming part of Letters Patent No. 742,194, dated October 27, 1903.

Application filed November 28, 1902. Serial No. 133,132. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. JOHNSON, a citizen of the United States, residing at Parkridge, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Toys, of which the following is a specification.

My invention relates to toys for producing sound, and has for its object the production of a soft harmonious sound when rotated. I attain this object by the device illustrated in the accompanying drawings, in which—

Figure 1 shows the complete device ready for use. Fig. 2 is a face view of the casing looking in the direction of the arrow, Fig. 1. Fig. 3 is an edge view of the casing. Figs. 4 and 5 are sectional views thereof, taken, respectively, on the lines 4 4, Fig. 2, and 5 5, Fig. 4. Fig. 6 is a side view of the fan or vane. Figs. 7 and 8 show the obverse and reverse faces, respectively, of the inner diaphragm.

Similar characters refer to similar parts throughout the several views.

The casing *a* consists of a hollow shell having a preferably circular periphery and sides convexing outward, so that the casing is thicker at the center than at the periphery. The tubes *b b* extend completely through the casing parallel to the central axis thereof and are located on opposite sides of said axis at equal distances therefrom. Said tubes are designed to receive the cord *c*, whereby the device is rotated. By preference said cord is provided with suitable handles *d d*. Inlet-apertures *e e* are provided in the obverse side of the casing at some distance from the peripheral edge thereof, and on the reverse side of said casing are the outlet-apertures *f f*, located at or upon said peripheral edge. The diaphragm *g* extends across the casing transversely to the central axis thereof and divides said casing into two compartments. Said diaphragm makes an air-tight joint with said tubes *b* and is otherwise imperforate except for a series of slots *h h*. Said slots lie radially by preference, and the reeds *i i* are secured to said diaphragm on the obverse side thereof, as shown in Fig. 8. The arrangement of said reeds is such that a current of air passing through the slots in the direction of the small arrows, Fig. 4, will cause said reeds to vibrate and produce a musical sound. The fan or vane *j* is secured within the casing in such a position as to extend radially and lie approximately in the same plane as the casing-axis. As a result, when said casing is rotated said vane will tend to throw the air radially outward in conformity to the law of centrifugal action, and consequently will draw air inward through the aperture *e* and force it through the slots *h*, past the reeds *i*, and outward through the peripheral apertures *f*. This causes the vibration of said reeds, and a musical tone results.

In operation the device is caused to rotate by first twisting the cord *c*, as shown in Fig. 1, and subsequently causing the handles *d* to alternately approach and recede.

By preference the reeds *i* are so constructed that they will produce sounds of different pitch which harmonize with each other, thereby affording a pleasing sound.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a device of the class described a hollow casing having inlet and outlet apertures for air, a slotted diaphragm in said casing, reeds mounted on said diaphragm over the slots therein and tubes passing through said casing parallel to the axis thereof said tubes making air-tight connection with said diaphragm and the sides of the casing substantially as described.

2. In a device of the class described, the combination of a revoluble hollow casing, a diaphragm therein dividing the same into two parts, inlet and outlet apertures in said casing on opposite sides of said diaphragm, a vane in said casing between said diaphragm and the outlet side of said casing, slots in said diaphragm, reeds over said slots, and tubes passing through said casing parallel to the axis thereof, said tubes making air-tight connection with said diaphragm and the sides of the casing substantially as described.

GEORGE A. JOHNSON.

Witnesses:
HOWARD M. COX,
VINCENT J. ROOT.