No. 716,025. Patented Dec. 16, 1902.

J. L. GAMMELL.

RESONATING OR SOUNDING TOY.

(Application filed Sept. 17, 1902.)

(No Model.)

Fig. 1.

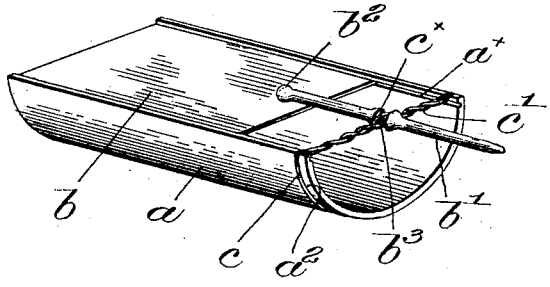


Fig. 2.

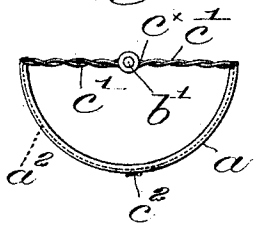


Fig. 3.

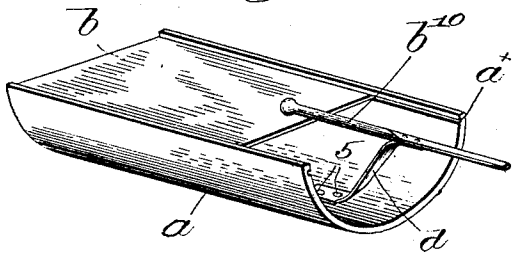


Fig. 4.

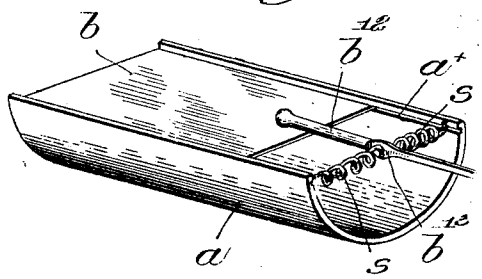
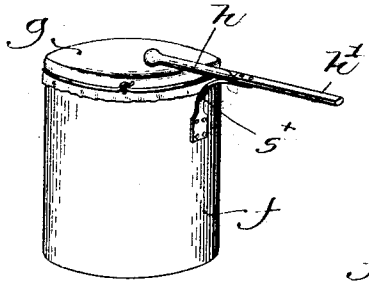


Fig. 5.



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UNITED STATES PATENT OFFICE.

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RESONATING OR SOUNDING TOY.

SPECIFICATION forming part of Letters Patent No. 716,025, dated December 16, 1902.

Application filed September 17, 1902. Serial No. 123,752. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH L. GAMMELL, a citizen of the United States, and a resident of Fitchburg, county of Worcester, State of Massachusetts, have invented an Improvement in Resonating or Sounding Toys, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object the production of a simple, attractive, and novel toy whereby a loud, rapid-vibrating, or rattling sound may be made by the fingers and having a great similarity to the effect produced by the beating of a snare-drum or by the rattling of a pair of bones.

By the use of the device forming the subject-matter of my invention time can be beaten for marching or other exercises and an attractive toy is provided at a small cost. The sound produced is high-pitched, shrill, and vibrant, of great carrying power, and with the exercise of some skill on the part of the user the pitch can be varied, with a corresponding variation in the range of sound produced.

The various novel features of my invention will be hereinafter described. and particularly pointed out in the following claims.

Figure 1 is a perspective view of a resonating or sounding toy embodying one very effective form of my invention. Fig. 2 is an end view thereof. Figs. 3 and 4 are perspective views of other forms of the toy in which my invention is embodied; and Fig. 5 is yet another modification, to be described.

Referring to Figs. 1 and 2, the sounding-toy is shown as comprising a substantially semicylindrical body a, preferably made of wood, cane, bamboo, or other suitable resonant material, and a longitudinal groove $a^{\times}$ is made in the inner surface of the body adjacent each longitudinal edge, one of such grooves being shown in Fig. 1. Into the two opposite grooves a diaphragm or sounding-board b is fitted, made of some thin and preferably highly-resonant wood, in this instance the sounding-board being shown as somewhat longer than half the length of the body. A tapper or beater is shown at b', shaped somewhat like a small drumstick, having a head b^2 at its inner end and having an annular groove b^3 between its ends. The tapper is so supported that its head extends over the diaphragm or sounding-board, and it is so connected with the body that it is yieldingly pressed against the board under normal conditions.

A number of different supporting spring-like means can be employed, and in Figs. 1 and 2 I have shown one of the simplest and cheapest of such means.

A string c is doubled and twisted oppositely at each side of the tapper, as at c', the loop $c^{\times}$ between the twists receiving the grooved part b^3 of the tapper, the ends of the string being then carried over the edges of body a and around its convex surface and tied together at c^2, Fig. 2.

Preferably the body is externally grooved, as at a^2, Fig. 1, and dotted lines, Fig. 2, to receive the ends of the string and retain it in place.

The parts c' are so twisted that the tapper-head is yieldingly held against the sounding-board, the opposite free end of the tapper projecting beyond the body, as clearly shown in Fig. 1. Now by depressing this free end the tapper-head is raised and the twist of the string tightened, so that when the tapper is released the head will be thrown against the sounding member b by the partial untwisting of the string, making a high shrill sound as the said member is struck.

The toy is held in one hand by grasping the body, and the fingers of the other hand are swept across the free end of the tapper, and by the exercise of a little skill the beating of a drum or rattling of bones can be imitated with a great degree of perfection. By covering the open end of the body opposite the tapper with the palm of the hand the pitch is raised, and thus pitch changes can be produced while the toy is being sounded or operated.

The construction described is, so far as I am now aware, the simplest and cheapest to make, and most satisfactory results are attained thereby; but my invention is not restricted thereto, for other forms or arrangements of parts may be employed with success.

In Figs. 3 and 4 the body a and sounding-board or diaphragm b are shown, as in Fig. 1; but I have shown a leaf-spring d in Fig. 3 to support and yieldingly impel the tapper b^{10} against the sounding-board, one end of the spring being secured to the interior of the body, as at 5, and the other end attached to the tapper.

In Fig. 4 the tapper b^{12} is flattened at b^{13}, and on opposite sides of the flattened part I have attached the inner ends of two coiled springs s, so coiled that the tapper is thrown against the sounding-board when retracted and released. The outer ends of the springs are secured to the sides of the body in any suitable manner, the springs also serving to support the tapper and connect it.

Manifestly the sounding member or diaphragm can be made of parchment, sheepskin, or other similar material stretched tightly over the body, and in Fig. 5 I have shown one mode of using such a sounding member. In said Fig. 5 the body f is made cylindrical, somewhat like the shell of a drum, and over one end a diaphragm or sounding member g, of parchment or thin skin, is stretched and tightly secured. A tapper h is connected with the body by a spring $s^{\times}$, attached to the exterior of the body and bent up and outward and secured to the tapper, so that the latter extends radially over the diaphragm and its free end h' projects beyond the body.

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

1. In a sounding toy, a hollow, resonating body, a resonant diaphragm extended across it and supported thereby, and a spring-controlled tapper mounted between its ends upon the body, one end of the tapper extending inward to strike the diaphragm, and the other end of said tapper projecting beyond the end of the body and constituting a finger-piece.

2. In a sounding toy, a hollow, tube-like body open at each end, a sounding-board attached thereto, and a vibratable, spring-controlled tapper mounted on the body near one of its ends, the inner end of the tapper coöperating with the sounding-board and the opposite end of the tapper projecting beyond the end of the body.

3. As a new article of manufacture, a sounding toy comprising a semicylindrical wooden body open at each end, a sounding-board attached to and spanning the body and adjacent one end thereof, a tapper, and a spring-like connection between the body and tapper, mounted on the other end of the body, the tapper extending longitudinally of the body and having its inner end in position to strike the sounding-board, the opposite, outer end of the tapper projecting beyond the end of the body.

4. As a new article of manufacture, a sounding toy comprising a semicylindrical wooden body, a thin sounding-board supported between the longitudinal edges of the body and extending from one end thereof toward the other end, and a vibratable, spring-controlled tapper connected with the body at such latter end, the outer end of the tapper extending longitudinally beyond the body and its inner end extending above and adapted to strike the sounding-board.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH L. GAMMELL.

Witnesses:

WALTER G. COREY,

HERBERT G. MORSE.