Aug. 2, 1966 J. C. BOWDEN 3,263,361

NOISEMAKING TOY

Filed Jan. 13, 1964

Fig. 1

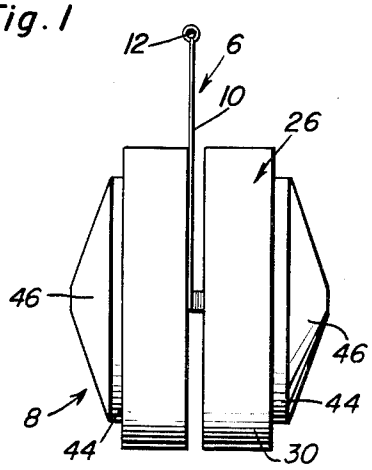


Fig. 2

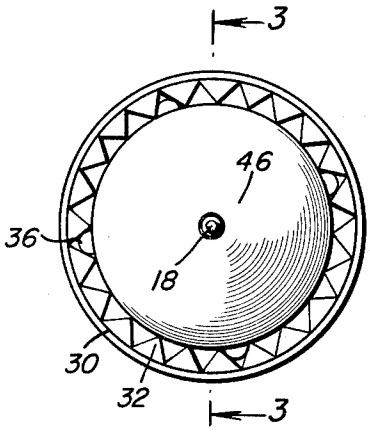


Fig. 3

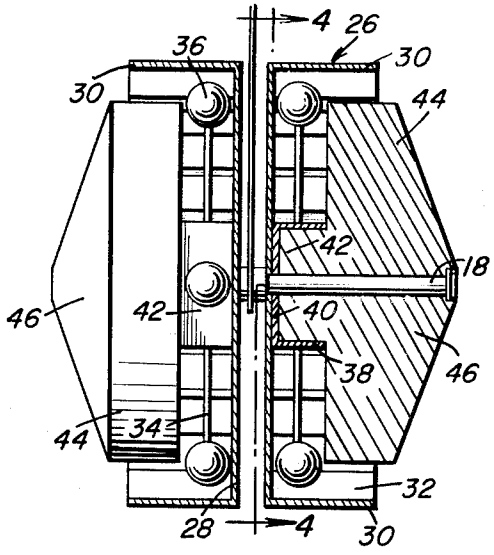


Fig. 4

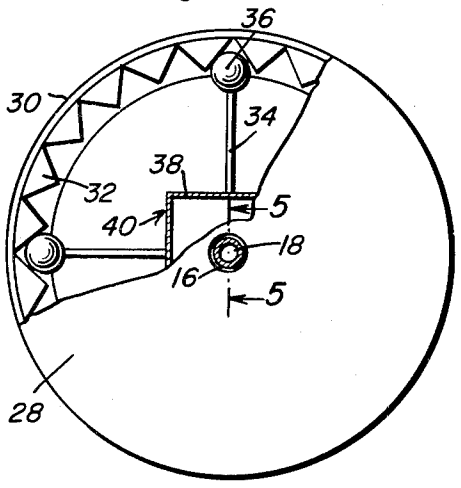
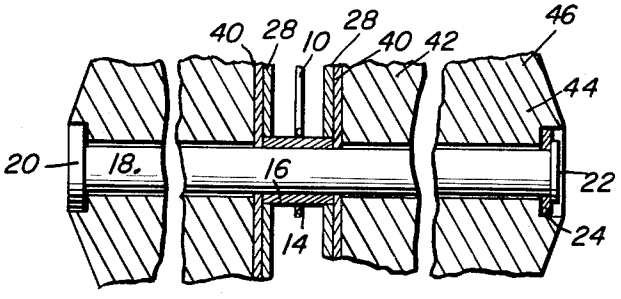


Fig. 5



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United States Patent Office 3,263,361
Patented August 2, 1966

3,263,361

NOISEMAKING TOY

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Filed Jan. 13, 1964, Ser. No. 337,414
6 Claims. (Cl. 46—61)

The present invention relates to a noisemaking toy for indoor and outdoor use having a string attached thereto whereby the toy may be hurled forward and backward for noisemaking.

As is well known to persons conversant with the art to which the invention relates many and varied styles and types of sound producing toys have been devised and used to produce click-clack rattling noises while others have been perfected with a view toward generating and making sounds of the so-called musical-tune types. It is also old in the art to achieve desirable fun-provoking and general amusement effects by using various types of cylindrical drums, and string equipped toys of some type or another. Keeping in mind the general trend toward the production of acceptable toys in this line of endeavor the present invention likewise has to do with a suitable toy including a string to wind onto and off of an axle and said axle functioning to support a pair of noisemaking disks and, in addition, a pair of specially designed units which, in turn, support the headed raking and noisemaking fingers.

More specifically one improvement in the instant adaptation has to do with a novel axle the central portion of which is provided with journal means with the string attached thereto, the said journal portion providing a highly satisfactory mounting for a pair of companion disks and the outer end portions of the axle functioning to support hub members which in turn function as novel support means for the springy vibratory fingers providing the intended as well as desired sound effects.

Stated somewhat more explicitly the disks comprise simple rotation axle supported disks which are in close spaced parallelism and which have outturned flanges defining rims and said rims being provided on inner peripheral surfaces with circumferentially spaced rack teeth which provide anvil-like abutments which when contacted by ball-like heads on the outer ends of the vibratory fingers generate the "rapid fire" noisemaking effects.

Then, too, novelty is predicated on the aforementioned hub members which are individually unique in a structural sense, are supported on outer end portions of the axle and are so constructed that they accommodatingly support square or equivalent caps which caps have the inner ends of the vibratory fingers attached thereto.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawing forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is an elevational view of a noisemaking toy constructed in accordance with the present invention;

FIGURE 2 is a view in side elevation of the structure seen in FIGURE 1;

FIGURE 3 is a sectional view on a larger scale with parts appearing in section and elevation and taken on the section line 3—3 of FIGURE 2 looking in the direction of the arrows;

FIGURE 4 is a section on the line 4—4 of FIGURE 3 with parts in section and also elevation; and

FIGURE 5 is a fragmentary view with parts in section and elevation wherein the proportions of the parts are exaggerated, the view being taken on the section line 5—5 of FIGURE 4.

As is evident from the illustration in FIGURE 1 the

structure is characterized chiefly by string-type handling means which is denoted generally by the numeral 6 and, on the forward or outer end thereof, head means which is denoted generally by the numeral 8.

The string-type handling means 6 comprises an elongated string 10 provided at its free end with an appropriate ring 12 capable of being received over a finger. The other end of flexible string 10 is provided with a loop 14 attached to a central sleeve or spindle 16. As can be appreciated by glancing at FIGURE 5 the sleeve 16 is journalled on axle 18. The axle 18 is provided with a large head 20 on one end thereof and removable nut 22 or the like combined with a washer 24 on the other end. Mounted on each end of sleeve 16 is a disk 26 each of which includes a circular plate 28 having a laterally extending peripheral flange or rim 30 at the outer edge thereof. The disks 26 are in spaced parallelism and the rims 30 provided at their outer peripheral portions are provided with inwardly extending rack teeth or projections 32 thereon. The central portions of plates 28 are joined together by the sleeve 16 as shown in FIGURE 5 which is mounted on the axle 18 so that the disks 26 rotate freely on axle 18. The teeth 32 on the inner peripheral portions of the rims 30 are circumferentially spaced transversely extending V-shaped teeth which resemble rack teeth and which in actual practice define intermittent hills and dales and consequently function as intermittently effective noisemaking anvils. To achieve this desired noisemaking effect circumferentially spaced fingers 34 are provided, said fingers having ball-like striker heads 36 at their outer ends which heads are fitted and arranged to rake around the teeth-like anvils and, in so doing, to produce the noisy sound effect desired.

It will be noted that the headed fingers have their inner adjacent ends fixed to equidinstant circumferenially spaced portions 38 of a substantially square mounting cap 40. The mounting of the paired caps is shown in FIGURE 3 wherein it will be seen that each cap is fitted and securely mounted on a rectangular adapter block or axial extension 42 which is an integral part of a hub-like member 44. The body portion 46 is generally conical in end elevation and the central portion is mounted on the cooperating end portion of the aforementioned axle or shaft 18. The manner in which these parts are individually constructed and mounted and also the manner in which they cooperate to bring about the unified assembly and effect illustrated in the views of the drawing is believed to be clear and understandable.

It is also believed that the manner of assembly and disassembling the component parts and also the manner of handling and using the ready-to-use device (FIGURE 1) will be clear. This is to say, when the child or other user employs the device somewhat in the nature of a "Yo-yo," a noise is produced by relative relation between the disks 26 and the hub members 44 which carry the balls 36 thereby producing a noise.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A noisemaking toy comprising: an axle, an elongated string operatively associated with said axle, at least one disk mounted for rotation on said axle, said disk having an inner peripheral surface provided with circumferentially spaced rack-teeth, spring fingers spaced circum-

ferentially around said axle and having inward ends carried by said axle by way of a hub member mounted thereon, the outer ends of said fingers being free and terminating in ball-like heads, said heads having intermittent raking noisemaking engagement with said rack-teeth.

2. A noisemaking toy comprising: an axle, an elongated flexible string operatively associated with said axle, at least one disk mounted for rotation on said axle, said disk having an inner peripheral surface provided with circumferentially spaced rack-teeth, spring fingers spaced circumferentially around said axle and having inward ends, a hub-like member, said member being provided at its axial center with an axially projecting anchoring block, the inner ends of said fingers being supported on said block, the outer ends of said fingers being provided with ball-shaped heads, said heads having camming intermittent raking noisemaking contact with said teeth.

3. The structure according to claim 2, and wherein the inner ends of said fingers are joined at equidistant circumferentially spaced points to an anchoring cap, said cap conforming in shape and size to said anchoring block and being fitted over and thus anchored on said block.

4. A sound-generating toy comprising, in combination, an elongated string, an axle, a pair of aligned duplicate disks having plates in parallelism joined at their central portions with a sleeve rotatable on said axle and having the string attached thereto, the outer marginal portions of said disks having annular rim portions provided on interior peripheral surfaces with circumferentially spaced teeth, said teeth providing impact anvils, hub members axially aligned with each other and mounted on the respective outer end portions of said axle, said hub members being located partially within the adjacent open side of the respective disks and having axially aligned block-like extensions, and circumferentially spaced vibratory fingers having their inner end portions supported from

said block-like extensions and provided at outer ends with responsive anvil-contacting noisemaking heads.

5. The structure defined in claim 4 and in combination, non-circular supporting caps with which the inner supported ends of the fingers are connected, said caps fitting conformingly over the respectively cooperable block-like extensions.

6. A manually maneuverable noisemaking toy comprising a string, an axle, a hub member mounted on each end portion of said axle, said hub member being provided on an inwardly disposed surface with an axially projecting block-like extension non-circular in end elevation, a correspondingly shaped cap conformingly fitted over said extension and provided on exterior surfaces with circumferentially spaced outstanding vibratory fingers terminating at outer ends in ball-like impact heads, and disks having a hub portion receiving said string and mounted on the axle, said disks having outwardly facing open sides encompassing marginal portions of the adjacent respective hub members, the inner peripheral surface of said disks being provided with rack-type teeth and said teeth constituting anvil-like abutments with which the heads on said fingers are designed and adapted to contact intermittently, whereby to produce the sound effects desired.

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