

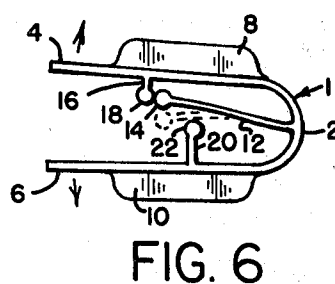
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CLICKER TOY

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CLICKER TOY

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ABSTRACT OF THE DISCLOSURE

A clicker toy constructed of relatively hard plastic material molded in the form of a U-shaped member having two arms bendable towards each other and a flexible sounding reed extending lengthwise therebetween. Non-aligned projections depending inwardly from the two arms serve to engage the sounding reed and snap it back and forth between the arms to produce clicking noises as the arms are pressed towards each other and then released.

BRIEF SUMMARY OF THE INVENTION

The noise making toy to which this invention is directed is particularly characterized by a simple, U-shaped structure having a relatively thin, sounding reed extending between the side arms thereof, the reed being fixed at one end to the base or nose portion of the U-shaped structure and freely suspended at its opposite end so that it may be snapped back and forth between the aforesaid arms to produce clicking noises.

The clicker toy is advantageously molded as a unitary structure from medium impact hardness plastic such as styrene, the relatively hard plastic material serving to produce the desired clicking noise as the aforesaid reed is snapped thereagainst.

As a particularly advantageous feature of my invention, I utilized two contact members extending inwardly from the aforesaid side arms of the U-shaped toy to snap the sounding reed back and forth in rapid succession to produce two clicking noises as the arms are pressed towards each other and then released. One of the contact members is in the form of a cam positioned to engage the free end of the sounding reed, and the other contact member is a stop element projecting from the other side arm between the opposite ends of the reed. As the arm on which the cam is carried is pressed inwardly, the cam contacts the reed and bends it over the stop element until the reed springs free and snaps against the cam-supporting arm to produce a clicking noise. As pressure on the arms is released and they move apart, the aforesaid cam member again engages the sounding reed, flexing it in the opposite direction and snapping it against the stop element to make a second clicking noise.

A further significant aspect of my clicker toy invention resides in the forming of the U-shaped toy with an arcuate nose portion from which the stiffened side arms extend rearwardly. The arcuate nose will bend and deform inwardly a sufficient amount to permit the cam carrying side arm to be pressed inwardly the necessary

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distance to actuate the sounding reed and accomplish the clicking action.

These and other objects and advantages of my invention will become readily apparent as the following description is read in conjunction with the accompanying drawings wherein like reference numerals have been utilized to designate like elements throughout the several views.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of the clicker toy of this invention;

FIG. 2 is a top, plan view of the clicker toy with the side arms thereof in the positions which they will normally assume;

FIGS. 3 through 6 are sequential top views showing the elements of the clicker toy in the positions which they will be in as the side arms are pressed together and then released to produce the clicking noises;

FIG. 7 is a side elevation view of the toy of FIG. 2; and

FIG. 8 is a front elevation view of the toy of FIG. 2.

As appears most clearly in the perspective view of FIG. 1, the noise making toy of this invention is comprised of a substantially U-shaped member indicated generally by reference numeral 1. U-shaped toy 1 includes a rounded nose portion 2 at its forward end and side arms 4 and 6 extending rearwardly therefrom. Arms 4 and 6 are provided with strengthening and stiffening webs 8 and 10 extending outwardly at right angles thereto in the manner shown in FIGS. 1 and 2. Disposed between arms 4 and 6 is a flexible reed 12 secured at one end to nose portion 2 and having a freely suspended contact portion 14 at its opposite end. Reed 12 is quite thin and may have a thickness on the order of .030 inch. Arms 4 and 6 and nose portion 2 of U-shaped member 1 have a somewhat greater thickness of approximately one-sixteenth inch. Since clicker toy 1 is intended to be used primarily as a novelty premium included in food packages, it is quite small and has an overall length of 2 inches or less. Side arms 4 and 6 may possibly be only one-quarter inch in height. Although stiffening webs 8 and 10 may be located at the top or bottom of arms 4 and 6, they are preferably positioned in the middle of arms 4 and 6 and extend lengthwise thereof in the arrangement shown in FIGS. 7 and 8.

For the purpose of producing the desired clicking noise, I provide two contact members 16 and 20 which depend inwardly from side arms 4 and 6 respectively. Member 16 acts as a cam to actuate reed 12 in manner hereinafter explained and is provided with an enlarged contact portion 18 on its inner end. Cam member 16 is positioned at a point on arm 4 adjacent to enlarged contact portion 14 of reed 12 in order that it may engage and actuate reed 12 to produce clicking noises in the manner set forth below. Inwardly projecting member 20 acts as a stop member for reed 12 and is located on arm 6 with its enlarged contact head 22 disposed between the opposite ends of reed 12.

Although various material including both metals and plastics could be used for the construction of my clicker toy 1, I prefer to mold U-shaped member 1 as an integral unit from a plastic material such as styrene having a

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medium impact hardness characteristic. Arms 4 and 6, being relatively thick, are quite hard and stiff throughout their length, and are particularly made so by the forming of stiffening webs 8 and 10 integrally therewith. Reed 12 is thin enough to be flexible and to act as a leaf spring when biased downwardly against stop 20 in the manner described below.

When clicker toy 1 is not being used or subjected to actuating pressure, side arms 4 and 6 will assume the outwardly angled rest position shown in FIG. 2. In order to cause toy 1 to make clicking noises, the operator grasps the outer ends of arms 4 and 6 between his thumb and forefinger and presses inwardly. The inwardly directed pressure indicated by the arrows in FIG. 3 will cause arcuate nose portion 2 to bend and deform inwardly, thereby permitting arms 4 and 6 to move towards each other to the position shown in FIG. 3. I have found that the necessary bending action of rounded nose 2 can be achieved by providing arcuate end 2 with a diameter of at least three-quarters of an inch. Stiffeners 8 and 10 insure that arms 4 and 6 remain straight and rigid throughout their lengths as pressure is applied to their outer ends, with the only bending action taking place at the points where arms 4 and 6 merge with arcuate nose portion 2. The application of pressure to the outer ends of arms 4 and 6 causes arm 4 to move inwardly to the point where enlarged portion 18 of cam 16 strikes contact portion 14 or reed 12 as shown in FIG. 3. Contact head 22 of stop member 20 will also be brought into contact with reed 12 at a point intermediate its length in the manner shown in FIG. 4. The continued application of pressure to arms 4 and 6 will cause cam contact portion 18 to flex reed 12 downwardly over contact head 22 of stop 20, thus bending reed 12 slightly to the shape shown in FIG. 4. As the operator continues to apply inwardly directed pressure to arm 4, cam 16 will bend the free end of reed 12 downwardly and inwardly to the point where contact portion 14 thereof is urged out of the path of cam contact portion 18. Contact portion 18 of cam 16 will then move past contact portion 14 of reed 12, thereby disengaging reed 12 and permitting it to spring free and snap against the underside of arm 4 to produce a relatively loud clicking noise. The bending and flexing of reed 12 over stop element 20 imparts a spring action to reed 12 when it is released by cam 16, causing it to snap into the position shown in FIG. 5 in contact with arm 4. The relatively hard plastic material from which U-shaped member 1 is formed causes a sharp and clearly audible clicking noise to be produced when reed 12 snaps against arm 4.

The cylindrical shape of contact lugs 14 and 18 and their parallel positioning with respect to each other as appears in FIG. 1 insures that they will engage each other along curved surfaces, thereby permitting contact lug 14 to more easily become disengaged from cam lug 18 as the free end of reed 12 bends away from cam member 16.

After contact portion 14 of reed 12 clicks against the underside of arm 4, the pressure on the outer end of arms 4 and 6 is released, thus permitting arms 4 and 6 to spring outwardly in the direction indicated by the arrows in FIG. 6. As arm 4 moves outwardly, cam contact head or lug 18 again strikes contact portion 14 of reed 12, whereby reed 12 is biased upwardly to the position shown in solid lines in FIG. 6. The continued outward movement of arm 4 then carries cam head 18 past contact portion 14 with the result that reed 12 snaps downwardly against enlarged portion 22 of stop 20 to produce a second clicking noise. As reed 12 strikes stop member 20, it vibrates to set up a resonance and thus a deeper and lower-pitched noise than was produced by the striking of reed 12 against arm 4. The downward flexing of reed 12 against stop 20 is illustrated in dotted lines in FIG. 6. After the inward pressure on arms 4 and 6 has been completely released, they will again assume the outwardly extending rest position shown in FIG. 2.

It is to be noted that stop member 20 projects inwardly

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a sufficient distance from arm 6 that reed 12 will strike it and be bent over it after arm 4 has been pressed inwardly a relatively short distance, thus precluding the need for extensive movement of arm 4. The bending and deformation of arcuate nose portion 2 is thus held to a minimum with the result that only limited stresses are imposed thereon. It will thus be seen that I have developed a novel clicker toy having noise producing elements so constructed and arranged as to permit the making of clicking noises with little danger of cracking or breaking the U-shaped noise maker.

It is possible to vary the pitch of the noise produced by toy 1 by placing the thumb and forefinger over the top and bottom of the space defined between arms 4 and 6 in the manner indicated in phantom lines in FIG. 7. This has the effect of providing a substantially enclosed sound chamber between arms 4 and 6 within which the sound waves are confined and muffled. The operator's fingers serve to dampen and absorb the sound waves emanating from reed 12, with the result that the clicking noise is lower pitched.

I contemplate that various changes may be made in the size, shape and arrangement of the component part of the clicker toy shown and described herein without departing from the spirit and scope of my invention as defined by the following claims.

What I claim is:

1. A noise making toy comprising:

- a generally U-shaped member having a forward nose portion and first and second arms extending rearwardly therefrom, said first one of said arms being movable inwardly towards said second arm;
- a flexible reed extending rearwardly from said nose portion between said first and second arms and terminating at a free end therebetween;
- a cam member depending inwardly from said first arm toward said reed, said cam member being so constructed and arranged that as said first arm is moved inwardly toward said second arm, said cam member engages said free end of said reed, flexes said reed in the direction of movement of said first arm, and then disengages said free end, thereby releasing said reed and permitting it to snap against said first arm to thereby produce a clicking noise.

2. A noise making toy as defined in claim 1, and further including:

- a stop member projecting inwardly from said second arm toward said reed at a point between said nose portion and said free end of said reed, whereby said cam member moves said reed into contact with said stop member and bends said reed thereover as said first arm is moved inwardly to thereby impart a spring action to said reed when it is released by said cam member.

3. A noise making toy as defined in claim 2, wherein: said reed and said cam member have enlarged contact portions on the ends thereof by means of which said cam member engages said free end of said reed and flexes it away from said stop member as said first arm returns outwardly to its normal position of rest, said cam member subsequently moving out of engagement with said free end of said reed whereby said reed springs inwardly and snaps against said stop member to produce a second clicking noise.

4. A noise making toy as defined in claim 3, wherein: said enlarged end portions on said cam member and said reed are of substantially cylindrical shape and are arranged with their longitudinal axes substantially parallel to each other, whereby said enlarged contact portions contact each other along curvilinear surfaces thereby permitting said cam member to sequentially engage and then release said free end of said reed as said first arm moves inwardly towards and then outwardly away from said reed.

5. A noise making toy as defined in claim 2, wherein:

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said U-shaped member is constructed from relatively hard material, said nose portion is of arcuate shape, and said arms are movable toward said reed by applying inwardly directed pressure to the outer ends of said arms, said pressure causing said arcuate nose portion to deform slightly in order to permit the movement of said first arm necessary to actuate said reed.

6. A noise making toy as defined in claim 5, wherein: said toy is molded as an integral unit from hard-setting plastic. 10

7. A noise making toy as defined in claim 1, and further including:

stiffening webs on each of said first and second arms.

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