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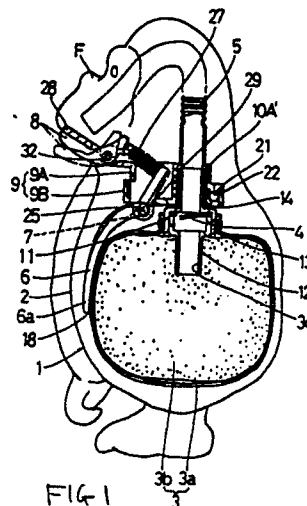
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(54) **Noise making toy.**

(57) A toy animal, doll or the like has a body portion (1), a blowing device (3) arranged to blow air past a vibration member (4) to generate a noise when the body portion is pressed, and a movable member (8) forming the lower jaw of the mouth of the toy and arranged to move when the body portion (1) is pressed. In use, pressing of the body portion results in simultaneous opening of the mouth and emission of a noise.



Noise making toy

The invention relates to a toy, such as a toy animal, doll or the like, which has means for making a noise when a body portion of the toy is pressed.

Dolls or stuffed animal toys equipped with "voice" mechanisms are known. Most such toys on the market use an electrical voice mechanism using an LSI (large scale integrated circuit) for sound generation, and as well as being expensive and requiring a battery, such toys can be less enjoyable because of the rather flat quality of the sound produced.

According to the invention there is provided a toy animal, doll or the like having a body portion, means for making a noise when the body portion is pressed, and means for causing a movable member of the toy to move when the body portion is pressed.

With a toy of this kind, the action of pressing the body portion results in simultaneous emission of a noise and movement of the movable member. The toy may be in human form or in the form of a variety of animals, for example a gorilla, pig, or duck, and the noise may be selected as appropriate to the particular form of the toy.

The means for moving the member may comprise a lever pivotally mounted within the body portion and arranged to pivot inwardly thereof when the body portion is pressed, the lever being resiliently biased to an outward position, and a link coupling the lever to the movable member. The resilient bias on the lever may for example be effected by a spring.

Preferably the movable member is pivotally mounted relative to a fixed member, the two members together defining lower and upper jaws arranged to be normally closed and to be opened by pivotal movement of the movable member when the body portion is pressed. Thus the jaws may define the mouth of the toy which is normally closed and may be opened by pressing the body portion of the toy, such pressing also causing the noise to be made.

In a preferred embodiment the link coupling the lever to the movable member comprises a spring so that return pivoting of the lever to its outward position can occur without closure of the jaws. With this arrangement, if a finger is accidentally placed between the closing jaws injury is prevented since the lever can return under its resilient bias to its normal outward position while the flexible link provided by the spring permits the jaws to remain open.

The means for making a noise may comprise a blowing device operable when the body portion is

pressed to blow air past a vibration member, and a resonance chamber for amplifying sound generated by the vibration member. Thus the noise is made mechanically rather than electrically and this can lead to savings in costs while allowing a rich variety of different noises depending on the creature to be imitated. Since a noise is made each time the body portion is pressed the toy is particularly suitable for making intermittent sounds.

Preferably the blowing device comprises a flexible bag in which is located a resilient filler arranged to restore the bag to its normal shape after it has been distorted by pressing of the body portion. The resilient filler, which may be in the form of a sponge, may also assist the return of the lever to its outward position when the body portion is released after being pressed.

In a preferred embodiment the resonance chamber is elongate and terminates in the region of the movable member. With this arrangement the noise will appear to originate in the vicinity of the movable member of the toy, creating a particularly good effect if the movable member forms part of the mouth of the toy animal, doll or the like.

Preferably the toy has a frame to which are secured the means for making a noise and the means for moving the movable member. This enables the components of the toy to be secured together in a compact manner.

A preferred embodiment of the invention will now be described with reference to the accompanying drawings in which:-

Figure 1 is a vertical section of a toy according to the invention, showing its internal components;

Figure 2 is a perspective exploded view of the internal components of the toy; and

Figure 3 is a perspective view of the toy.

Referring to Figure 3, the toy animal in the form of a gorilla comprises a stuffed body 1, made by die-forming a piece of relatively soft plastic, and covered almost entirely by cloth C. The face F, hands and feet of the body are left uncovered. The body 1 has a belly 2 which is the part to be pressed to cause a noise or "voice" to be made.

The voice mechanism consists of a self-restoring blowing device 3 comprising a wind bag 3a made of a sheet of soft synthetic resin and a sponge filler 3b located inside the bag 3a for its restitution, lower and upper valve members 12,13 arranged to clamp therebetween a vibration member or reed 4 and coupled with an outlet 3c of the blowing device 3, and a resonance device 5 formed of a flexible bellows pipe connected to the outlet side of the valve members 12,13. The lower

valve member 12 protrudes into an insertion hole 3d of the sponge filler 3b.

The lower valve member 12 fits within a lower portion 10B of the upper valve member 13 and is secured thereto by means of an inwardly projecting snap-fit ring 15 of the portion 10B. The outlet 3c of the blowing device 3 is defined by the neck of the wind bag 3a which is secured to the outer surface of the upper valve member 13 by a fixing ring 11. An annular recess 16 in the lower portion 10B of the valve member ensures that the connection is secure.

The pipe of the resonance device 5 has an end ring 14 engaging a shoulder of the valve member 13 and is secured to the upper portion of the valve member 13 by means of annular ribs 17 formed on the latter. The pipe is bent through a substantial angle such that its end remote from the valve members is located in the region of the mouth of the toy gorilla. The pipe extends vertically through a passage 10A formed in a frame 9 of the toy.

The frame 9 consists of an upper part 9A connected to a lower part 9B by means of ribs 22 which project inwardly from an upper rim 20 of the lower part 9B so as to engage in corresponding recesses 21 formed in the upper part 9A. A lever 6 is pivotally supported on coaxial spindles 25 which extend from supports 24 depending downwardly from the frame upper part. The lever 6 projects downwardly through an opening 23 provided in the frame lower part 9B. A spring 7 provided on the spindles 25 has one end engaging the frame lower part and the other end engaging beneath the lever 6 to urge it outwardly. The free end 6a of the lever is disposed between the belly 2 of the toy gorilla and a portion 18 of the wind bag 3a which is to be pressed.

The frame upper part 9A is formed with an outward projection which forms the upper jaw 28 of the mouth of the toy gorilla. At the base of this projection are located a pair of supports 31 for coaxial spindles 32 which pivotally mount at 33 a movable member 8 forming the lower jaw of the mouth. The movable member is linked to the lever 6 by a coil spring 27 which is hooked at one end to a lug 34 of the movable member and at the other end to a lug 35 provided on an upwardly projecting rib 29 of the lever 6. The movable member 8 is thereby linked mechanically to the lever 6 in such a way that when the rib 29 of the lever 6 comes into contact with the frame 9, the movable member which forms a lower jaw is in a closed state against the upper jaw 28. The use of a coil spring for the abovementioned linkage effectively protects from injury a finger caught accidentally between closing upper and lower jaws.

In the toy constructed as described above, pressing the belly 2 of the body 1 causes the

blowing device 3 to be compressed, making it work as a kind of pump so that air discharged from this pump causes the vibration member 4 to vibrate, resulting in generation of sound which, after being amplified by the action of the resonance device 5, comes out of the mouth of the body 1 to be heard as the "voice" of the animal. Since the pressing action on the belly 2 also operates the lever 6, the movable lower jaw 8 linked to the other end of the lever 6 through the coil spring 27 is forced to open, i.e. the pressing action leads to opening of the mouth. The controllability of the length of the voice and a unique characteristic of synchronization between the mouth opening and the voice length permit a truly realistic effect to be achieved. Furthermore, a wide range of voices can be provided by changing the size, thickness and material of the vibration member 4, and the selection or change of these features is very easy. Another advantage is that the blowing device 3, composed of the wind bag 3a and a sponge filler 3b, is easy to construct, and is not affected by deformation which occurs during transport or storage. The power of the pump can be easily modified and once the blowing device has been made it can if necessary be compressed to fit into a space smaller than its natural size. The blowing device 3 could alternatively take the form of a folding bellows rather than the illustrated flexible bag.

In summary, the toy is provided with a built-in simple and compact voice mechanism and an operating device 2 - a part of the body 1 - linked to the movable member 8 which is an element of the mouth. Therefore, the voice can be synchronized with the movement of the movable member 8, allowing a unique and characteristic vocalization. Moreover, the voicing manner can easily be changed by varying the way in which the operating device or belly 2 is handled, thereby providing true fun as a toy. In addition, because the toy requires no battery and complicated devices, a low manufacturing cost can be expected.

Modifications of the invention, both in its broad aspects and its specific embodiments, may be apparent to a person skilled in the art and it is intended that such modifications be encompassed within the scope of this disclosure.

Claims

1. A toy animal, doll or the like having a body portion, means for making a noise when the body portion is pressed, and means for causing a movable member of the toy to move when the body portion is pressed.

2. A toy as claimed in claim 1, wherein the means for moving the member comprises a lever pivotally mounted within the body portion and arranged to pivot inwardly thereof when the body portion is pressed, the lever being resiliently biased to an outward position, and a link coupling the lever to the movable member. 5

3. A toy as claimed in claim 2, wherein the movable member is pivotally mounted relative to a fixed member, the two members together defining lower and upper jaws arranged to be normally closed and to be opened by pivotal movement of the movable member when the body portion is pressed. 10

4. A toy as claimed in claim 3, wherein the link coupling the lever to the movable member comprises a spring so that return pivoting of the lever to its outward position can occur without closure of the jaws. 15

5. A toy as claimed in any preceding claim, wherein the means for making a noise comprises a blowing device operable when the body portion is pressed to blow air past a vibration member, and a resonance chamber for amplifying sound generated by the vibration member. 20 25

6. A toy as claimed in claim 5, wherein the blowing device comprises a flexible bag in which is located a resilient filler arranged to restore the bag to its normal shape after it has been distorted by pressing of the body portion. 30

7. A toy as claimed in claim 5 or 6, wherein the resonance chamber is elongate and terminates in the region of the movable member.

8. A toy as claimed in any preceding claim, having a frame to which are secured the means for making a noise and the means for moving the movable member. 35 40

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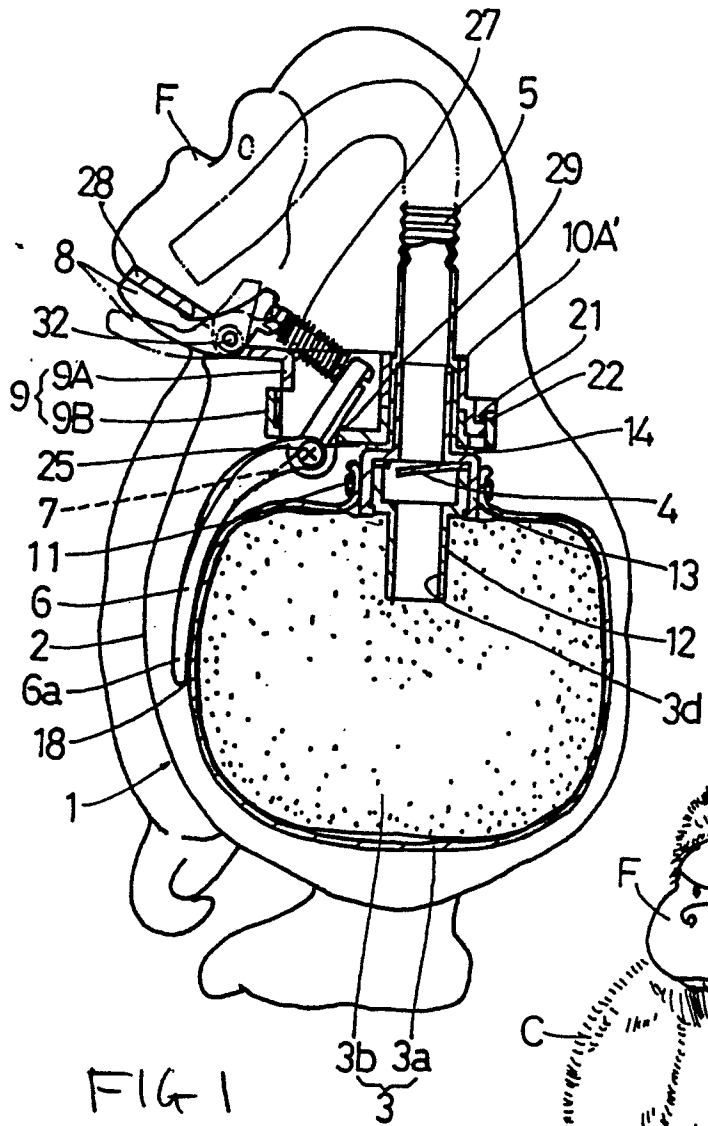


FIG 1

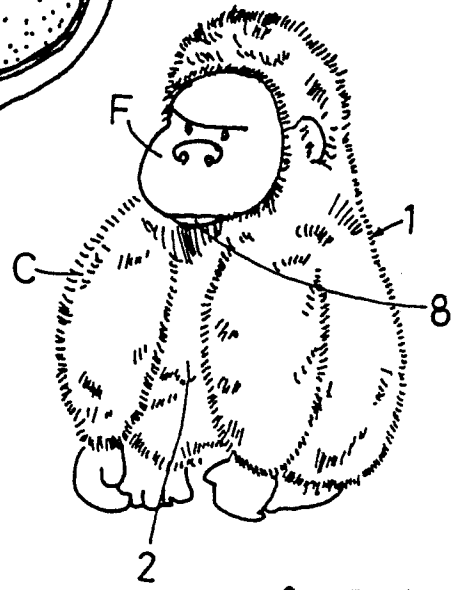


FIG 3

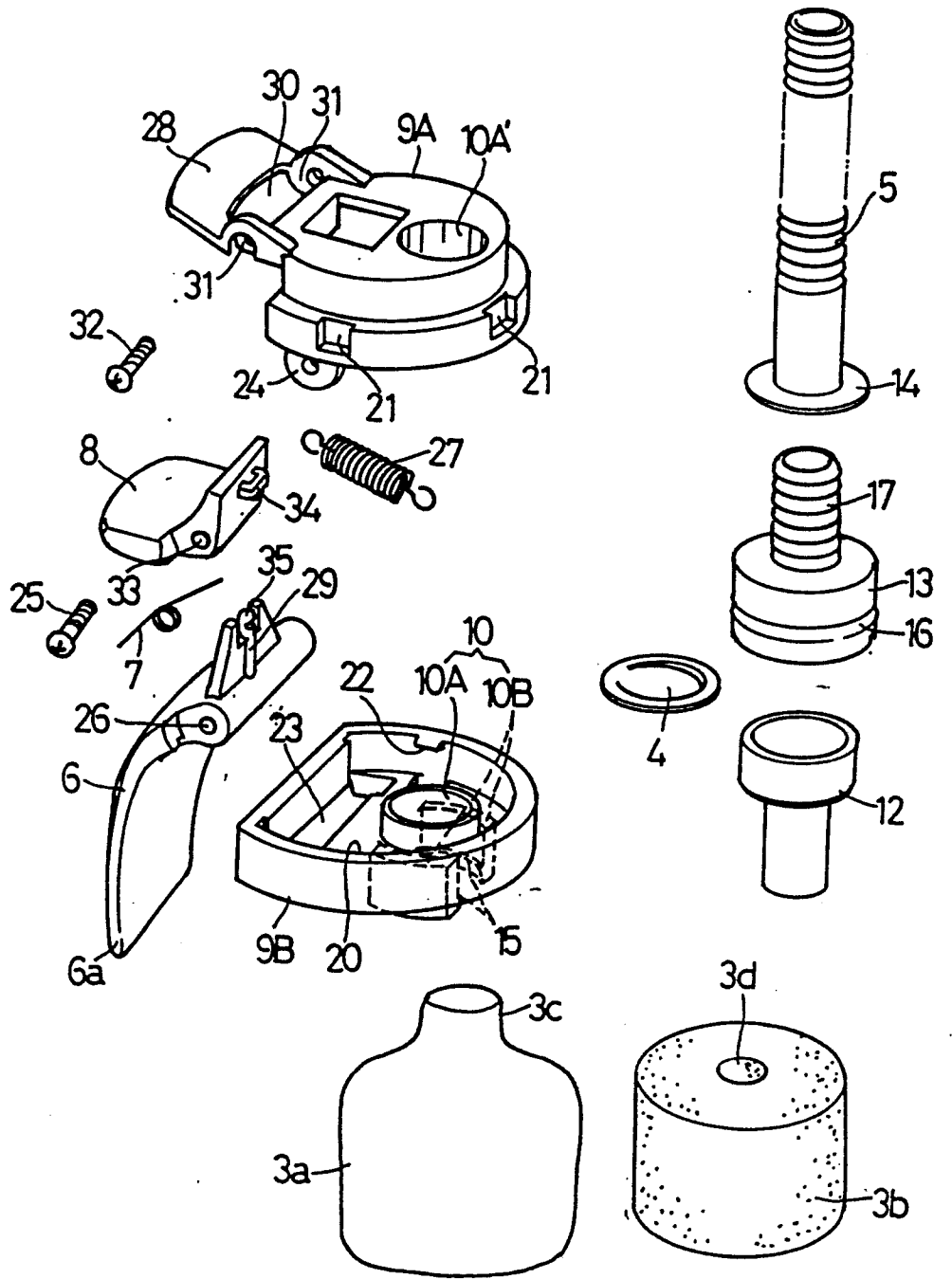


FIG 2