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(11) Publication number:

0 534 032 A1

(12)

EUROPEAN PATENT APPLICATION(21) Application number: **91500150.7**(51) Int. Cl.⁵: **A63H 3/24, A63H 3/28**(22) Date of filing: **30.12.91**(30) Priority: **22.08.91 ES 9102637**(43) Date of publication of application:
31.03.93 Bulletin 93/13(84) Designated Contracting States:
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W-8000 München 22 (DE)(54) **Improved doll producing motions and sounds.**

(57) The present invention designed a doll toy (1) of the type externally adopting a configuration of a young boy or girl comprising a trunk of preferably hard material and preferably soft extremities and the head piece (-3-) of specially flexible and soft material are associated thereon, with the purpose of providing its deformation and subsequent retrieval with the operations performed from the outside and allowing in this way the operation of the incorporated sensors (-5-) via the deformable wall(-7-) without resorting to the wall perforation and also allowing the motions of the face features and rotation of the head(-3-) relative to the neck promoted by the organs (-4-,-12-) of an internal electromechanical unit (-2-) connected to an electronic circuit, these motions being coordinated with the release of sounds generated by the electronic circuit, these sounds being then collected and reproduced by an acoustic arrangement. The electronic circuit is connected to an on-off switch operated by a command located at the doll's back.

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The present invention refers to an improved doll producing motions and sounds.

The present invention is designing a doll toy of the type outwardly adopting the configuration of a young boy or girl and comprises a trunk of preferably hard material wherein preferably soft extremities are associated and the head piece, being of preferred special flexible and soft material with the purpose to provide its deformation and associated retrieval in the operations exerted from the outside, so that the incorporated sensor can be activated through the deformable wall without resorting to the perforation of the wall and also the head rotating motions relative to the neck are allowed and promoted by an internal electromechanical unit connected to an electronic circuit, which motions are being coordinated with the release of sounds generated by the electronic circuit, these sounds being collected and reproduced by an acoustic arrangement. The electronic circuit is being connected to an on-off switch driven by a command located at the doll's back.

When the doll is switched on, a typical cry is heard. Upon pressing the doll's mouth with a feeding bottle, the sensor located behind the mouth is activated and the electromotor driving the supporting arm of said sensor is then also connected, and the motions of said arm are thereby transmitted to the doll's mouth pretending functions like that of chewing and concurrently being heard a sound associated with this function. With the removing of the feeding bottle and release of the pressure on the sensor, the mechanism operates a second arm promoting a forward rotation of the doll's head, a sudden return towards its usual position and concurrently the operation of a contact in the electronic circuit and a sound is then generated similar to a hiccup until with some pats on the doll's back, a circuit contact is activated generating the release of some different sounds pretending to be a belch and laughter.

To facilitate the explanation, the present description is accompanied by some drawing sheets wherein a preferred embodiment cited only by way of example is shown.

In the drawings:

Figure 1 is a schematically front view of the doll, with the internal electromechanical mechanism illustrated therein.

Figures 2 and 3 are showing the respective elevation side views of the doll's head illustrated at the resting and forwardly tilted positions.

Returning to the figures, in the embodiment illustrated is a doll, generally referenced numerically as -1- externally adopting the required shape and including inside an electromechanical unit contained in a frame-2- associated to the neck of the head-3-.

The frame comprises an electromotor, which powered shaft is driving a conventional reducing mechanism for operating a first rocking arm-4- previously pushing the free end of said arm through the non-perforated flexible wall-7- configuring the doll's mouth, with the purpose that a clutch is being set up between the arm and the mechanism. At the said end of the arm-4-, a sensor -5- is provided and activated by said pushing action made with a suitable means, for instance, a feeding bottle toy cooperating with the flexible nature of the material making up the doll's mouth. The arm-4- while being pressed, is getting a rocking motion which is transmitted to the flexible material of the doll's mouth, and a motion is produced pretending to be a chewing function synchronised with the sound associated to said function generated by the electronic circuit -6- and collected by the reproducible acoustic arrangement -8-.

Upon releasing the pressure on the arm -4-, a second arm -9- is being operated by the mechanism which is forwardly rotating and displacing the head-3- in this same sense; a mechanism releasing arrangement combined with a calling spring -10- is forcing the arm-9- and the head-3- to quickly return synchronised with a sound generated by the electronic circuit through the operation of the flexible contact -11- located at the end of the arm-9-. The other end of the arm -9- is configuring a head -3- pusher cross member -12-.

The doll includes a back's striking operatively sensor by means of which the motor is disconnected and new sounds being generated.

Claims

1. Improved doll producing motions and sounds of the type adopting throughout a conventional suitable shape, including inside an electronic circuit connected to an on-off switch driven from a command located at the doll's back external side; a battery set commanding the circuit, being engaged to an enclosure provided with this purpose at the doll's body, this enclosure being reached from an opening also located at the doll's back area and the opening being closed with an adjustable cover; and to an acoustic arrangement collecting and reproducing the release of sounds generated by the electronic circuit, these sounds being heard from the outside, essentially characterized in that the doll's head is incorporating a frame associated with the flexible neck of the doll's head, said frame supporting an electromotor connected to the electronic circuit by means of a sensor located at the free end of a pivoted arm, this sensor being kept located at the doll's mouth back without the doll being perfo-

rated and at a position ready for a pressing operation from the outside, because of the flexible material of said mouth, and the mechanical clutching of the arm with the mechanism providing its motion is produced by said action, and this motion pretending to be a chewing function is transmitted to the flexible material of the doll's mouth synchronised with the release of sounds associated with this function, these sounds being generated by the electronic circuit and collected and reproduced by the acoustic arrangement.

2. Improved doll producing motions and sounds, according to claim 1, characterized in that the electromotor and reducing mechanism holding frame is incorporating a second pivoting arm automatically clutched to the mechanism when the external pressure on the sensor of the first arm is released and the arm declutched, this second arm is rocking on an excentric shaft associating the arm to said frame and said arm configuring at the upper longest stretch, an arquated portion curved towards the doll's face, joined to the center of a convex curved cross member towards said doll's face, the end of the bottom lowest stretch of said arm provided with a flexible contact operatively arranged to be activated by a fixed stop in the frame, with the arm pivoting motions transmitted to the doll's head, which is making a forward rotation, suddenly returning rearwardly because of the existence of a releasing mechanism and a calling spring synchronised with the release of a sound similar to a hiccup generated by the electronic circuit and collected and reproduced by the acoustic circuit.
3. Improved doll producing motions and sounds, according to claims 1 and 2, characterized in that it comprises a doll's back striking operatively sensor setting up a connection with the electronic circuit through which the release of certain sounds such as belch and laughter are generated.

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Fig. 1

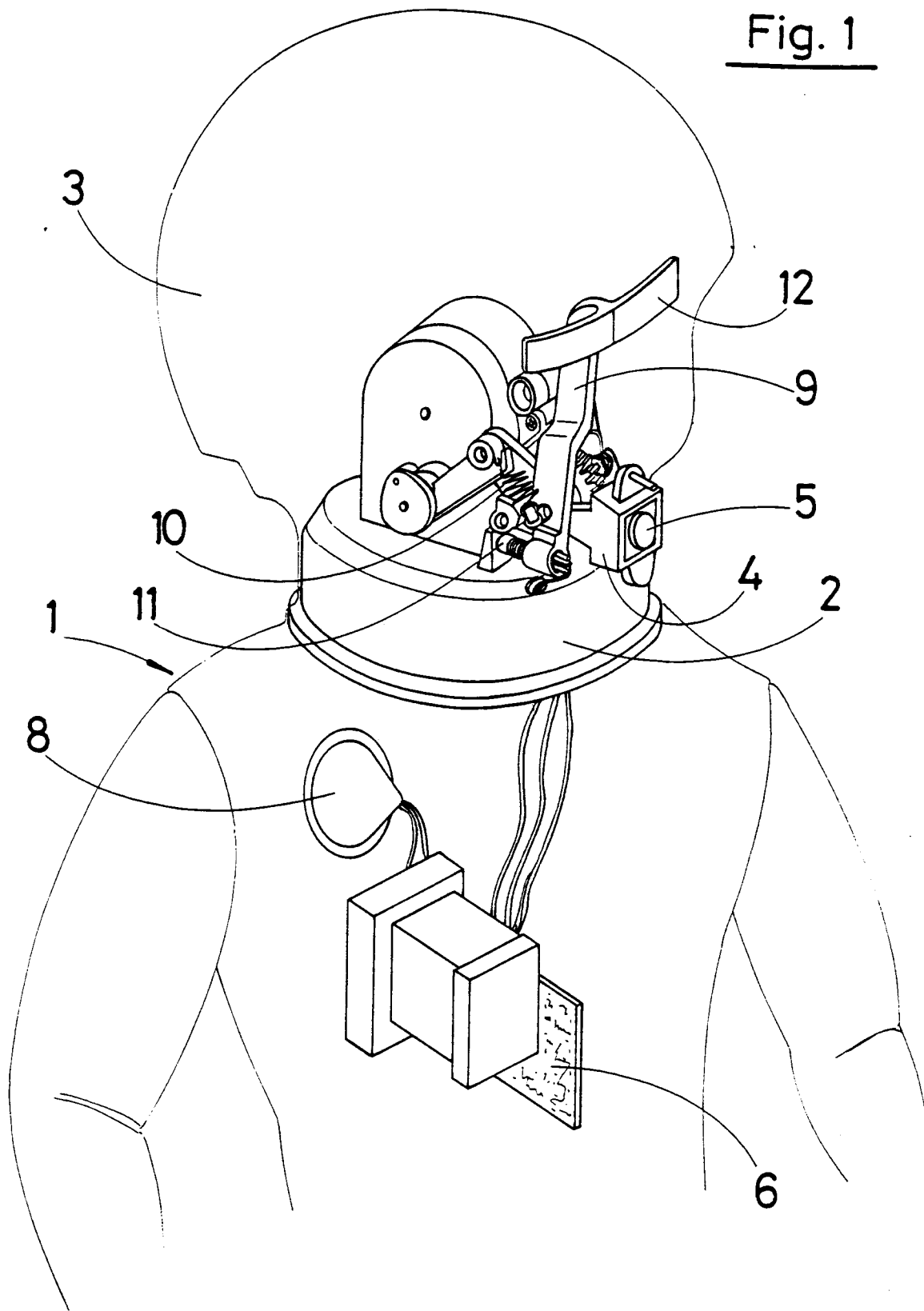


Fig. 2

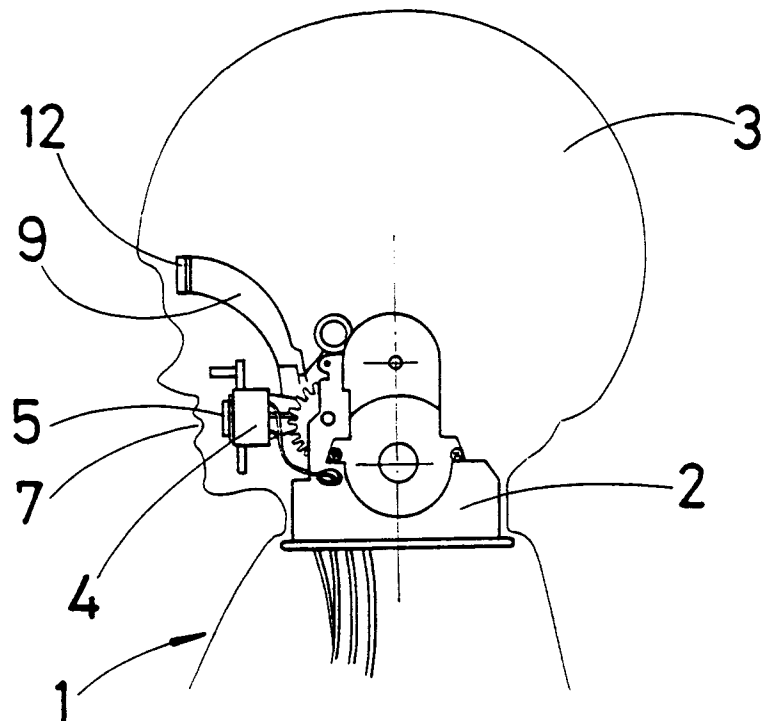
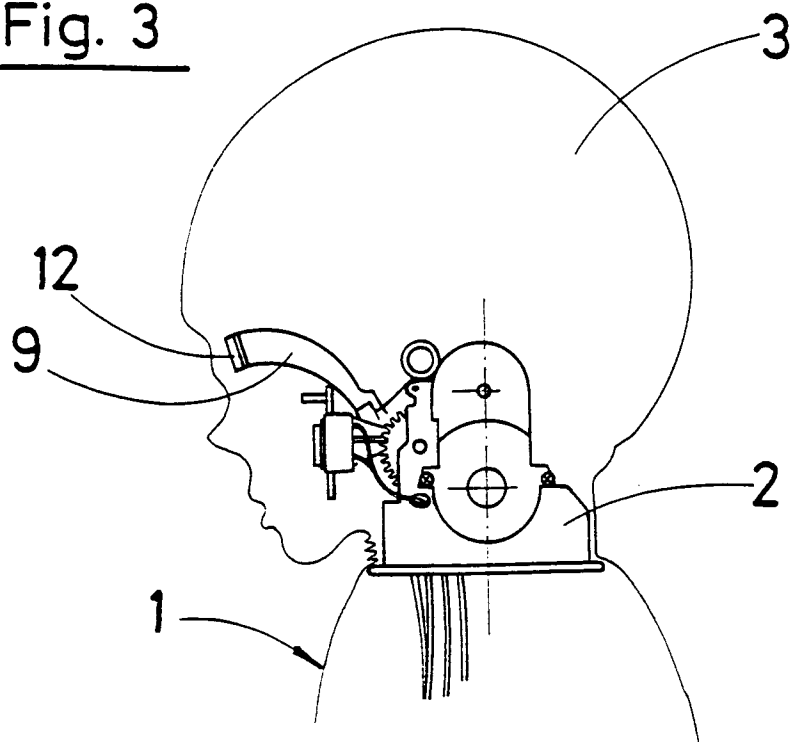


Fig. 3





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EUROPEAN SEARCH REPORT

Application Number

EP 91 50 0150

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
A	DE-A-3 039 376 (IDEAL TOY CORP.) * claims 1,2; figures 2,3A-C * ---	1-3	A63H3/24 A63H3/28
A	US-A-4 582 499 (SAIGO ET AL.) * claim 1; figures 1,2,6 * ---	1-3	
A	US-A-5 037 345 (NAKAYAMA) * column 3, line 25 - column 4, line 15; claims 1,2; figures 1,2 * ---	1-3	
A	US-A-4 687 457 (MILNER) * claim 1; figure 1 * ---	1,3	
A	US-A-4 249 338 (WEXLER) * column 1, line 60 - column 2, line 27; figures 2,3 * -----	1,3	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			A63H
The present search report has been drawn up for all claims			
Place of search BERLIN		Date of completion of the search 25 NOVEMBER 1992	Examiner MICHELS N.
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		I : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- & : member of the same patent family, corresponding document	