Feb. 9, 1954 P. REKETTYE 2,668,393

DOLL CONSTRUCTION WITH NOISE EFFECTS

Filed June 1, 1949

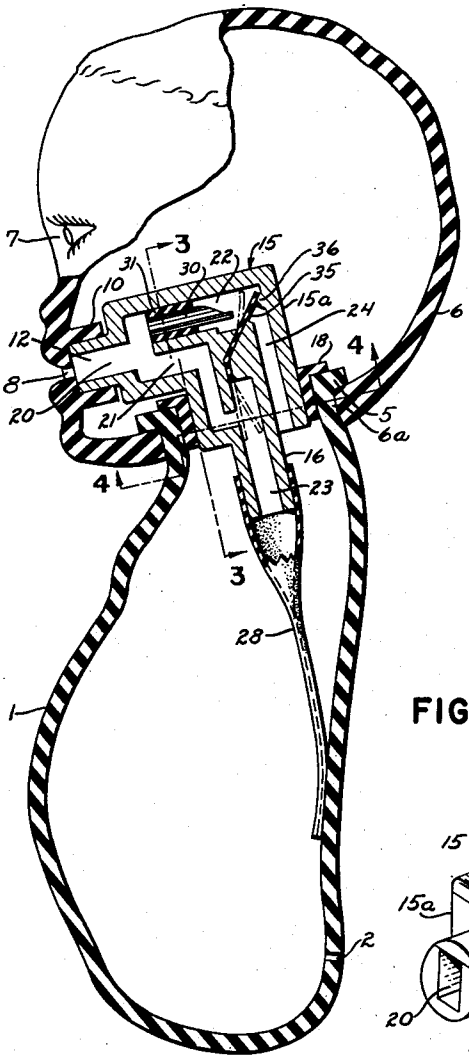


FIG. 1

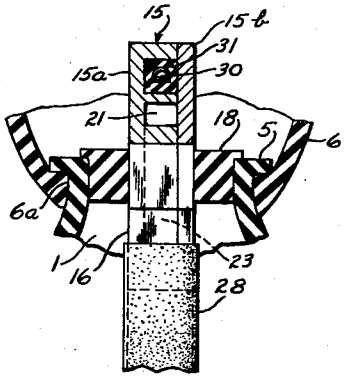


FIG. 3

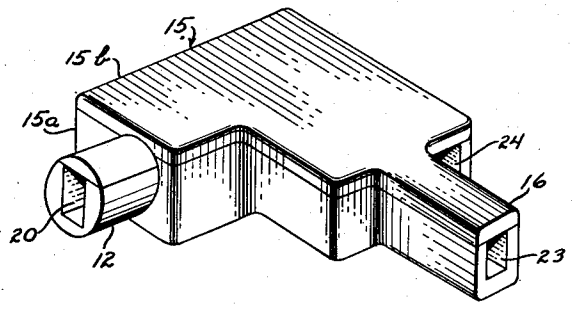


FIG. 2

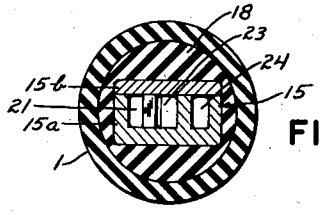


FIG. 4

INVENTOR.
PAUL REKETTYE

BY

ATTORNEYS

Patented Feb. 9, 1954

2,668,393

UNITED STATES PATENT OFFICE

2,668,393

DOLL CONSTRUCTION WITH NOISE EFFECTS

Paul Rekettye, Akron, Ohio, assignor to The Sun Rubber Company, Barberton, Ohio, a corporation of Ohio

Application June 1, 1949, Serial No. 96,479

6 Claims. (Cl. 46—117)

1

The present invention relates to a new and improved construction of hollow compressible dolls, which dolls are so constructed and designed that a combination of novel sound effects will be obtained. In the preferred form of the invention as shown and described herein these sound effects are combined with a drinking and wetting device. By the novel combination which is shown and described, the doll will perform the several functions of drinking, wetting, crying, and "burping."

While the best known and preferred form of the invention combines all of the functions recited above in a single doll structure, the invention is not necessarily confined to the conjoint presence of all of these functions as one or more may be omitted.

One of the objects of the invention is to combine a voice or cry with a device which creates a distinctly different noise which may imitate the noise made by an infant's "burp," as it is called, the problem heretofore having been, in attempting to combine two distinct noises, to avoid muffling one sound or the other. The present device is so constructed that each sound is distinctly heard. For this purpose the construction of the device is such that the sounds are conducted so that they issue from the mouth of the doll which more nearly simulates the natural sounds.

The device is so constructed that it will operate in both a soft-head doll and a hard-head doll. The distinction is that a hard-head doll is usually provided with movable eyes set in sockets so that, as the doll is placed in a reclining position the eyes will close and thus simulate the act of sleeping, while in a soft-head doll the eyes are molded in the head. The eye sockets in a hard-head doll afford openings for the passage of air to and from the interior of the doll, which would interfere with the operation of the air actuated noise making devices. The construction and operation of sleeping-eye mechanisms are well known in the art and it is not necessary to show such devices. The invention is shown as applied to a soft-head doll but, as the noise making devices are shown mounted in a plug which fits in and closes the neck, the device is equally adaptable to a hard-head doll. In this connection, the noise making attachment is so designed that it will not interfere with the mechanism located in the head which causes the eyes to move as the position of the doll is changed.

The mechanism shown and described presents many novel features over and above those which have been specifically set forth above. A reed

2

is shown as the means for creating the voice or cry and, as this is located directly behind the mouth aperture, the cry is shriller and more distinct than when the reed is located at some point within the body where it may be muffled by the head. The reed or other noise making device which may be substituted therefor is so located that water given to the doll through the mouth will by-pass the reed and not interfere with the action of the reed.

The device which simulates the "burp" is shown as a curved and flattened rubber tube like the well known "squawker" but other devices may be substituted therefor.

The two noise making devices, i. e. the reed and the squawker or "burping" elements give out distinctly different noises, one operating on the compression of the hollow torso and the other on the recovery thereof.

The squawker or "burping" device also acts to conduct water or other liquid from the mouth to the lower interior of the torso and will act as the check valve which compels the air to escape through the other noise making device when the torso is compressed.

While the invention is shown in its best known and preferred form, changes and modifications may be made without departing from the principles of the invention as set forth in the claims. As indicated above, not all of the several functions need be used in any given combination as it is possible to omit one or more of the functional devices without departing from the invention. The wetting device is an important selling feature for dolls of this type but this may be omitted if desired.

In the drawings:

Fig. 1 is a vertical section taken through the head and torso of a soft-head doll with the noise making unit in place in the neck.

Fig. 2 is a view in perspective of the noise making unit removed from the doll.

Fig. 3 is a section on the line 3—3 of Fig. 1.

Fig. 4 is a section on the line 4—4 of Fig. 1.

In the drawings, the numeral 1 indicates the torso of a doll which is hollow and made of rubber or any plastic substitute for rubber. In the lower region of the torso is a small vent 2 which, if the doll is to be a drinking-wetting doll, permits water or other liquid introduced through the mouth to flow out and thus simulate wetting. This vent is of small caliber so that it does not allow the passage of enough air to interfere with the operation of the noise making devices, either on the compression of the torso or on its recovery

to normal condition. It will be understood that the torso is provided with limbs in the usual fashion.

Around the neck portion of the torso is a flange 5 which engages and holds the head 6 in position on the doll through the reduced neck 6a. As explained above this is shown as a soft head doll having eyes formed as at 7 and an opening 8 at the mouth. On the interior of the head, at the rear of the mouth, is formed an enlarged socket 10 in which is inserted a tubular projection 12, formed on the noise making unit or assembly, which is given the general numeral 15.

The unit 15 is provided with the passageways to conduct air into and out of the doll and also to conduct water from the mouth to the interior of the torso. It is preferably made in two sections, a main body section 15a and a cover section 15b. This unit is preferably molded of rubber or a plastic material, the sections being cemented or welded together. The unit is L-shaped, one arm being provided with the projection 12 and the other arm being provided with a second projection 16 which extends downwardly into the torso. The vertical or inwardly extending arm of the unit is fitted into a plug 18 which is in turn fitted in the neck portion of the torso. As shown, the plug 18 closes off the interior of the torso from the interior of the head, which, for the reasons stated, adapts the device for either a hard-head or a soft-head doll. It will be noted that the insert 15, due to the inclination of the neck portion, is set at an oblique angle to the center line of the doll so that it points or inclines toward the back of the torso.

The passage 20, leading from the mouth, divides into upper and lower angular passages 21 and 22, respectively. The passage 21 leads into a vertical passage 23 which opens at the projection 16. The passage 22 leads into a vertical extension 24 which opens into the torso just below the plug 18.

At the discharge point of the passage 23 is located one of the noise makers, preferably the squawker or "burping" unit. This is a flattened tube of soft rubber indicated by the numeral 28. This type of noise maker is old and well known and if it is permitted to depend freely in the doll it will, when air passes through it, give out a noise sometimes referred to as a "raspberry." In the adaptation shown, however, the squawker is extended to a point where the lower end of the flattened tube rests against the inner surface of the back of the torso, so that the tube is given a curvature or bend at a point set back somewhat from the discharge end of the tube. This curvature or bend in the tube changes the noise given out by the squawker from a single explosive noise to a broken or interrupted noise which simulates the noise created by a "burp."

The flattened tube 28, whether held in the position shown in Fig. 1 or allowed to hang freely, will also act as a check valve and while it permits air to enter the torso, when the torso reassumes its normal or expanded condition, it will prevent outward flow of air through the passage 21—23 when the torso is squeezed. The flattened tube will permit the flow of water or other liquid introduced in the mouth to the interior of the torso and thus the doll can function as a drinking-wetting doll. The mouth opening or orifice 8 is large enough so that it will receive the nipple of a toy nursing bottle which the child uses to give water to the doll.

Referring now to the passage 22—24, it will be observed that at the point where the passage 22 opens from the mouth opening 20, a reed 30 is shown set in a collar 31. A reed is shown in this position because it simulates an infant's cry when air is forced out of the torso and through the passage 22—24. Any other type of air actuated noise maker may be substituted for the reed, it being noted however that the noise generated by the reed 30 is of an entirely different character from that created by the flattened tube 28 whether used in the bent relationship shown in Fig. 1 or not.

In order that the squawker 28 may function on the return of air to the interior of the torso, it is necessary to provide some type of check valve in the passage 22—24. For this purpose the element 15a is slotted as shown in Fig. 1 and a flat piece or leaf of rubber 35 or other flexible material is set in the slot and extends across the end of the passage 22, the free end of the valve 35 resting upon a ledge 36 formed in the inner wall of the passage. This forms the requisite check valve which permits air to pass out of the torso and through the reed when the torso is compressed but will shut off the return of air through the passage 22—24 as the torso resumes its normal expanded condition.

In Fig. 1 the valve 35 is shown in dotted lines as extended into the passage 23 where it lies against the inner end of passage 21 and would thus form a check valve at this point operating in reverse. This however would be used only as a precautionary measure for the flattened tube will usually serve as an adequate check valve and the extension of the valve 35 is not essential. If, however, some other form of noise maker were substituted for the "squawker" such a second check valve would be required.

It will be noted that as the reed 30 or a substitute therefor is located directly back of the mouth opening, the sound given out thereby when the doll is compressed issues directly from the mouth and is much shriller and more distinct than if this element were located at some point within the head. Further, it will be noted that the sound created by the flattened tube or squawker is also carried by the passage 22—24 directly to the mouth.

As a result, when the doll is squeezed, a noise resembling a cry issues directly from the mouth and when the pressure is released and the torso expands the inrushing air creates the different noise which is likewise carried to and issues from the mouth. If the tube 28 is located as shown in Fig. 1, the noise created on the return of the doll to normal simulates a "burp."

Attention is further called to the fact that the reed 30 is located above the passage 22 and water entering the mouth will by-pass the reed as it flows into the torso.

The doll shown herein is equipped to perform a multiplicity of functions which resemble the natural acts of an infant and the result is extremely attractive to children. The functions of drinking, wetting, crying and burping have never, to my knowledge, been successfully performed in a doll. If this is combined with sleeping eyes the product will be even more attractive.

It will be appreciated that while the preferred embodiment of the invention is as shown, changes, modifications and improvements may be

made therein without departing from the essentials of the invention as set forth in the appended claims. While the invention is shown as applied to a doll, it may likewise be used in conjunction with any other hollow toy. When the word "doll" is used in the claims it is not to be taken as restricted to the form of an infant.

What is claimed is:

1. In a doll construction a hollow compressible body and a head thereon, said head having a mouth opening, a noise making unit supported in the head and having a passage communicating with the mouth opening, said passage having two branches leading to the interior of the torso, a noise maker in the form of a flattened rubber tube attached to the unit at the inner end of one of said branches, a second air actuated noise making device in the second branch passage, and a check valve for said second branch passage permitting air to pass out of the torso through said second branch passage but preventing return flow of air therethrough.

2. A drinking-wetting doll comprising, a hollow compressible body, a head thereon, an orifice located in the head, a water discharge passage in the lower part of the body, two passages leading from the orifice to the interior of the body, check valves for said passages causing air expelled from the body to flow through one of said passages and air returning to the body to flow through the other passage, the check valve for inflow passage consisting of a flattened flexible tube depending into the interior of the body normally held in flattened condition and permitting the flow of water inwardly into the body, and a reed located in the outflow passage.

3. A drinking-wetting doll comprising a hollow compressible body, a head thereon, an orifice located in the head, a water discharge passage in the lower part of the body, two passages leading from the orifice to the interior of the body, check valves for said passages causing air expelled from the body to flow through one of said passages and air returning to the body to flow through the other passage, the check valve for inflow passage consisting of a flattened flexible tube depending into the interior of the body normally held in flattened condition and permitting the flow of water inwardly into the body, and an air actuated noise making device located in the outflow passage.

4. A doll having a head with a mouth opening and a flexible hollow torso with a neck extending into the head, a fitting located in the neck, said fitting having two air passages communicating with the mouth opening and leading to the interior of the torso, a reed in one of said passages, a check valve between the reed and the inner end of the said one passage and operative to prevent the inward flow of air through said one passage, and a flattened rubber tube affixed to the inner end of the other passage, said rubber tube constituting a check valve to prevent outward flow of air through said other passage.

5. A doll having a head with a mouth opening and a flexible hollow torso with a neck extending into the head, a fitting located in the neck, said fitting having two air passages communicating with the mouth opening and leading to the interior of the torso, an air actuated noise making device in one of said passages, a check valve between the noise making device and the inner end of the said one passage and operative to prevent the inward flow of air through said one passage, and a flattened rubber tube affixed to the inner end of the other passage, said rubber tube constituting a check valve to prevent outward flow of air through the other passage.

6. A burping and crying mechanism for dolls, comprising: a burping tube which is flattened and substantially closed in its normal position and means for maintaining said burping tube with its longitudinal axis curved; a crying member having a one way valve associated therewith, said one way valve being arranged to prevent operation of said crying member when air is passing through said mechanism in a direction to operate said burping tube and said burping tube being oppositely directed to prevent passage of air therethrough when air is passing through said mechanism in a direction to operate said crying member, whereby air passing through said mechanism in one direction will produce a burping sound and air passing in an opposite direction will produce a crying sound.

PAUL REKETTYE.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
754,148	Kuhlemann	Mar. 8, 1904
1,484,148	Olt	Feb. 19, 1924
1,651,137	Lloyd	Nov. 29, 1927
2,098,925	Schaeffer	Nov. 9, 1937
2,317,255	Crowell	Apr. 20, 1943
2,346,580	Henry	Apr. 11, 1944

FOREIGN PATENTS

Number	Country	Date
17,027	Great Britain	of 1895
583,132	France	Oct. 27, 1924