Jan. 28, 1941. A. M. KATZ 2,230,114

DOLL

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FIG. 1

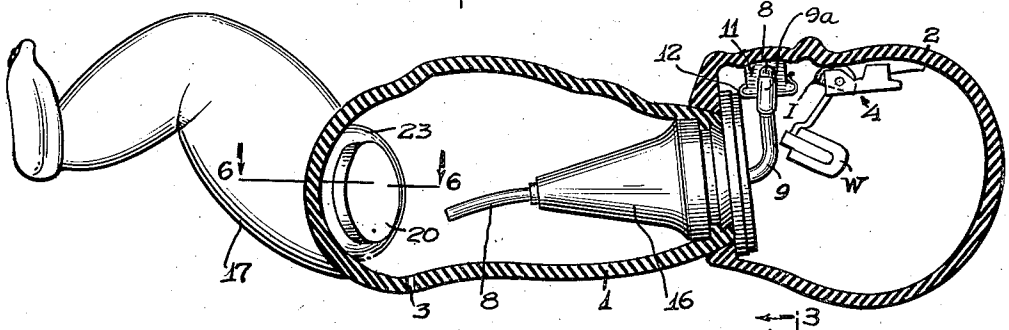


FIG. 2

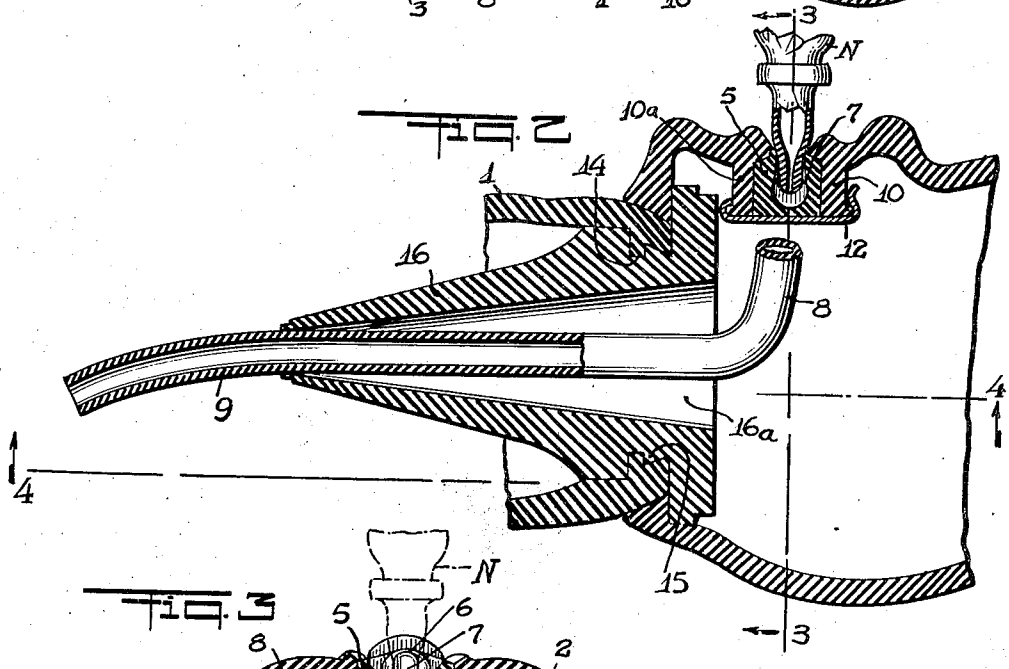
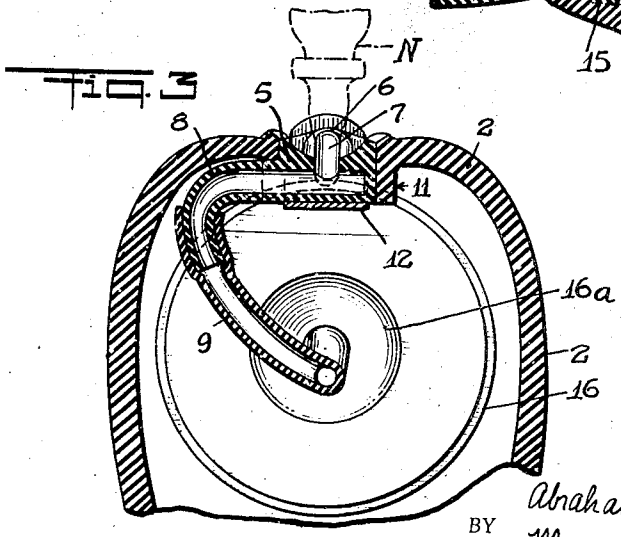


FIG. 3



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Fig. 4

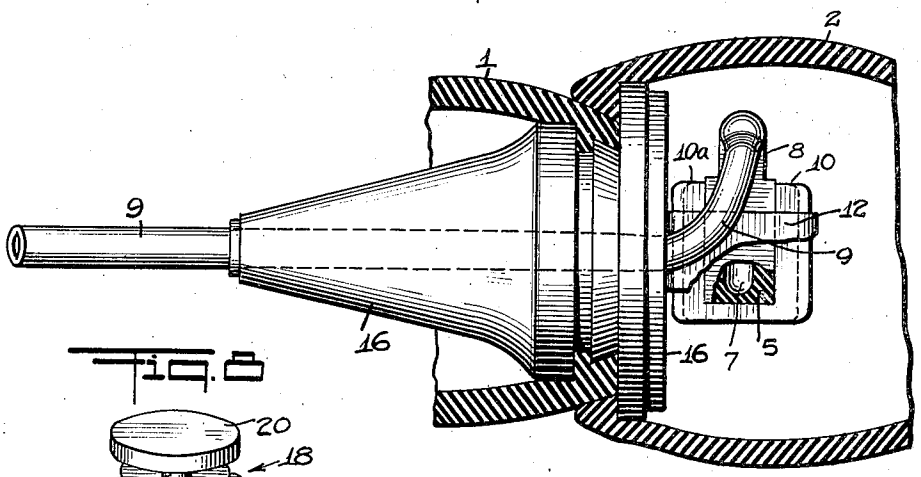


Fig. 8

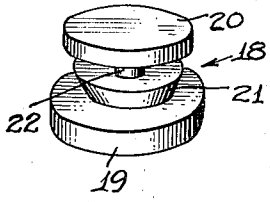


Fig. 5

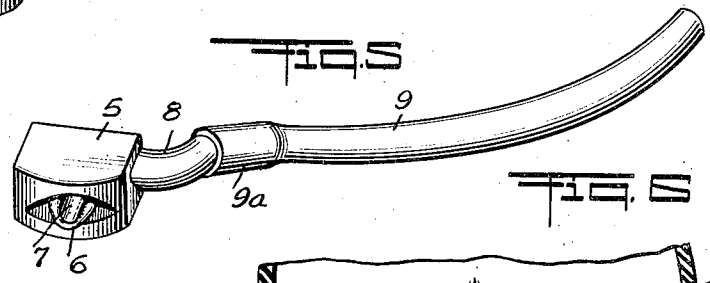


Fig. 6

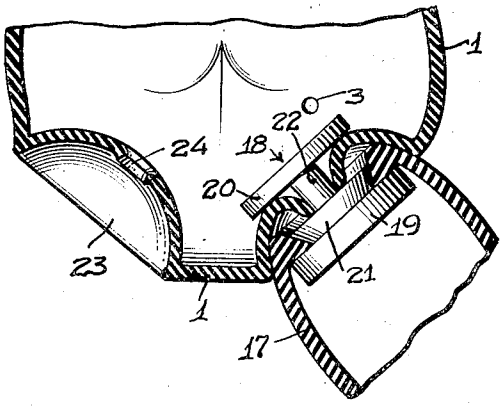
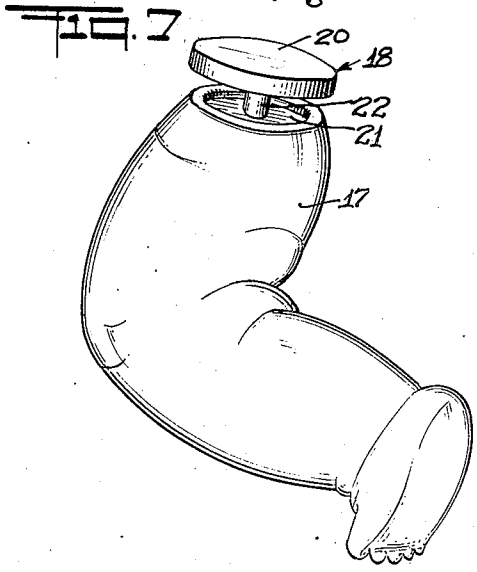


Fig. 7



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Patented Jan. 28, 1941 2,230,114

UNITED STATES PATENT OFFICE

2,230,114

DOLL

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Application July 14, 1937, Serial No. 153,506

2 Claims. (Cl. 46—141)

My invention relates to a new and improved doll.

One of the objects of the invention is to provide an improved doll of the "wetting" type, of sturdy and inexpensive construction.

Another object of the invention is to provide a construction whereby the head of the doll can be turned freely relative to the body of the doll, around the vertical axis of the doll.

Another object of the invention is to provide a doll having a body which is provided with an outlet, and with limb members which fit into said body, in a liquid-tight manner.

Another object of the invention is to provide a doll having simple and improved means whereby liquid can be drawn into the body of the doll from a toy nursing bottle or the like, and leakage of said liquid from the body is prevented, save through an outlet opening.

Other objects will be stated in the following description and drawings which illustrate a preferred embodiment thereof, it being understood that the above statement of the objects of my invention is intended generally to explain the same without limiting it in any manner.

Fig. 1 is a longitudinal section showing the improved doll, certain of the parts being shown in elevation.

Fig. 2 is an enlarged detail section, showing the construction of the mouth, of the suction inlet member located in the mouth, and the other parts necessary for making a "wetting" doll.

Figs. 3 and 4 are respectively sections on the lines 3—3 and 4—4 of Fig. 2.

Fig. 5 is a perspective view of the inlet member, together with the pipe which is attached thereto.

Fig. 6 is a section on the line 6—6 of Fig. 1.

Fig. 7 is a perspective view of a leg member, together with the member which connects said leg member to the body of the doll.

Fig. 8 is a perspective view of the connecting member which is shown in Fig. 7.

As shown in Fig. 1, the doll is provided with a body 1 and with a head 2. The body 1 is preferably made of stretchable and resilient rubber material, so that the body 1 has the normal shape shown in Fig. 1. Said body can be easily compressed, and its wall is stretchable and elastic and bendable. The body 1 is provided in the rear wall thereof with an outlet opening 3, so that liquid which is contained within the hollow body 1, can be forced out of said opening 3, by compressing the body. The opening 3 can be made very fine, so that little or no liquid drips through said opening 3, if the body 1 is not compressed. Said opening 3 can be made of sufficiently large diameter, so that liquid will drip slowly out through said opening, even if the body is not compressed.

The head 2 may be made of hard material or soft material, but it is preferably made of resilient rubber material which may be less resilient and stretchable and bendable than the more elastic rubber material which is used for making the body 1. Said head may be substantially hard and rigid.

As shown in Fig. 1, the bottom of the head 2 is provided with a socket, whose wall is tapered inwardly, namely, towards the vertical axis of the doll, from the bottom of said wall to the top thereof. The adjacent part of the outer wall of the body 1 is correspondingly tapered, so as to provide a close fit between the head 2 and the body 1. However, the head 2 can be turned easily, relative to the body 1, about the longitudinal or vertical axis of the body.

The head 2 may be of any standard shape and it may be provided with certain standard parts. For example, I have illustrated eye-members I, which are mounted so as to rock up and down, and also to roll sideways. Said eye-members I are held to the doll by means of the usual assembly 4, and a weight W is provided at the end of a suitable arm, in order to move the eyes of the doll, when the body of the doll is tilted. These features are standard and well known so that no specific description thereof is required.

The head of the doll is provided with a suitable mouth opening. An inlet member 5 which has a tongue 6, and which is provided with an inlet channel or inlet passage 7, is located in said opening. Said inlet member 5 is hollow, and its walls are imperforate, save for the inlet channel 7, and an opening in a side wall, to which a resilient rubber pipe 8 is connected. The member 5 can be made of resilient and bendable rubber material, and the pipe 8 may be molded integral with said member 5.

A second pipe 9, also made of rubber, has a portion 9a which fits liquid-tight over the pipe 8.

The inner surface of the front wall of the doll is provided with an inwardly extending projection 11 which serves to hold the member 5 with its channel 7 in registration with the mouth opening of the doll. This mouth opening is clearly shown in Fig. 2.

As shown in Fig. 2, the member 11 is provided with vertically spaced walls 10 and 10a, so as to provide a channel into which the member 5 fits

snugly and liquid-tight and frictionally, and under slight compression, so that member 5 is retained in position without the use of cement or the like.

As shown in Fig. 2, the wall of the body 1 is provided with an inwardly projecting flange or shoulder 14, near the top of said body 1. Likewise the top-portion 15 of the inner surface of the wall of the body is inclined inwardly, or toward the longitudinal vertical axis of the body of the doll, from the bottom of said portion 15 to the top thereof.

The head 1 and the body 2 are interlocked by means of a funnel-member 16, which is provided with a central opening 16a. This member 16 is also made of resilient and elastic and bendable rubber. It is more easily bendable than the head 2. As shown in Fig. 2, said member 16 is provided with a top flange which overlies and abuts the inner lateral wall of the head of the doll, at the bottom of said head. The outer wall of said member 16 is also shaped so as to interlock with the flange or shoulder 14. Likewise the outer wall of said member 16 has a portion thereof which is shaped so as to snugly abut the wall-portion 15 of the body 1 of the doll. Said funnel-member 16 makes a liquid-tight fit with the body of the doll and with the head of the doll. The head and the body and the funnel member can be made separately, and they can be readily assembled by bending and forcing the bendable funnel-member into the position shown in Fig. 2, and then bending and forcing the top flange of said funnel-member 16 into the head. This assembly is facilitated because the wall of the head is much more rigid than the wall and the flange of member 16.

The member 16 is under longitudinal or axial tension when the head and body and said member 16 are assembled, so that the head and body are held forced together, so as to produce a liquid-tight fit.

This tension also forces the top flange of the member 16 against the inner surface of the lateral bottom wall of the head, to produce a liquid-tight fit.

The pipe 9 extends through the opening 16a of the funnel 16, and pipe 9 makes a liquid-tight fit with the bottom end of said opening 16a.

The respective means which are used for connecting the respective limbs of the doll to the body thereof are of the same construction. I have therefore described such connecting means, only in connection with a leg member 17.

As shown in Fig. 8, said connecting means 18 has a top disc-like button 20 of cylindrical shape, a bottom disc-like button 19, which is of greater diameter than the top button 20, a tapered portion 21, and a cylindrical stem 22. Said button 19 is also of cylindrical shape. The various parts of the member 18 can be molded integral with each other, from bendable and resilient rubber or the like.

The upper or inner face of the tapered member 21 is of greater diameter than the bottom or outer face thereof, as shown in Figs. 6 and 8.

As shown in Fig. 6, the body 1 is provided with concave sockets 23, and the walls of said sockets have openings 24.

Said openings 24 have walls whose shapes are accurately shown in detail in Fig. 6.

The hollow legs and hollow arm members are also made of bendable and stretchable and resilient rubber.

In order to assemble a leg or arm member with the body of the doll, the button 19 and the wall of the limb can be bent, and the opening at the end of the limb can be expanded so as to interlock the wall of the limb, at its open end, with members 19 and 21. As shown in Fig. 6, the wall of the limb member 17 is shaped at the inner open end of said limb member, so as to interlock with the top surface of the member 19, and with the tapered wall of the member 21. The wall of the limb member is provided with an inner flange or shoulder for this purpose, and the inner surface of said wall of the limb is tapered away from the axis of the limb. Members 19 and 21 make a liquid-tight fit with limb 17. The stem 22 extends through the opening 24 of the socket so as to make a liquid-tight fit. The diameter of cylindrical stem 22 can exceed or be less than the minimum diameter of the wall of said opening 24. Said opening 24 has an entrant wall-portion which is tapered inwardly, and an inner wall-portion which is tapered outwardly. When the parts are assembled, the stem 22 may be maintained under some longitudinal tension or it may be under no tension. Hence the openings in the wall of the body of the doll are closed in a liquid-tight manner, by means of the connecting members 18, since member 20 makes liquid-tight contact with the adjacent part of the wall of the body, and stem 22 may also act as a plug to close opening 24.

The limbs may fit liquid-tight in sockets 23. However, the limbs can be bent or turned relative to the body.

In order to hold the inlet member 5 firmly to the walls 10 and 10a, I can use a clip 12 made of resilient metal. This clip 12 has inwardly extending arms, which overlie and interlock with ribs or flanges of the walls 10 and 10a, as shown in Fig. 2.

The various parts of the doll can therefore be manufactured separately, and said parts can be easily and cheaply assembled.

The funnel member 16 provides a bearing for the head, so that the head can be turned relative to the body, about a vertical axis.

When the head of the doll is turned relative to the funnel member 16, this does not affect the connection provided with the interior of the body 1 by means of the pipe 8. Likewise the pipe 8 is made of flexible and resilient rubber, so that the head can be turned substantially without injuring the liquid-tight fit between the outlet of the opening 16a, and said pipe 8. Likewise, even if the pipe 8 is turned around a vertical axis, this does not injure said liquid-tight fit with the outlet of opening 16.

Fig. 2 shows the usual nursing bottle N having a nipple which can be inserted into the channel 7.

When the body of the doll is compressed the air escapes through the opening 3. When the body of the doll is released, it expands so as to resume its normal shape. The opening 3 is preferably made very fine. Hence, as the body of the doll expands, a partial vacuum is created within the interior of the body 1, which exerts suction on the contents of the nursing bottle. The nursing bottle and its nipple are designed so that very slight suction can draw the liquid from the bottle into the body. Numerous well-known designs are available for this purpose.

This suction draws liquid from the nursing bottle N, through the member 5, and then through pipe 8 into the interior of the body. While the opening 3 is very fine, liquid will drip from the

interior of the body 1, out through the opening 3, even if the body 1 is not squeezed. If desired, the opening 3 can be made so minute as substantially to retain the liquid within the body 1, unless said body 1 is squeezed.

If the body 1 is tilted or inverted, the liquid cannot run back into the head, because the liquid accumulates between the outer wall of the funnel member 16 and the adjacent part of the interior wall of the doll, and as previously mentioned, the funnel 16 makes a liquid-tight fit with the top open part of the body of the doll.

The pipe 8 depends below the bottom of the funnel 16 and this depending part of the pipe 8 can be made as long as is desired. Hence, little or no liquid will run back into the head of the doll through the pipe 8, even if the body of the doll is inverted.

I have shown a preferred embodiment, but numerous changes and omissions could be made without departing from the invention.

I claim:

1. A doll having a body, said body having a socket in the wall thereof to receive a limb member, said socket having an opening therein, said body and said limb member being made of stretchable and elastic rubber, and a connecting-member connecting said limb member movably and liquid-tight in said socket to said body, said connecting-member having end-buttons, the inner end-button being located within the body, the outer end-button being located within the limb member, said limb member having an inner wall-portion which abuts a lateral surface of the outer end-button, said end-buttons being connected by a stem which is integral with the inner end-button and by means of a tapered element which is located between said stem and the outer end-button, said limb member having a tapered wall-portion which abuts the longitudinal tapered wall of said tapered element, said stem extending through said opening of said socket, the inner end-button abutting a portion of the inner surface of the wall of the doll.

2. In combination, a doll body having a wall which is provided with an opening at the top end thereof, the wall of said body also having an outlet opening below the top end of said body, the outer wall of said body being inwardly tapered at the top end of said body, the inner wall of said body being provided with an inwardly projecting flange adjacent the top end of said body, the inner wall of said body being also inwardly tapered above the top of said flange, the wall of said body being made of stretchable and elastic rubber, a head having an opening at the bottom thereof, the wall of said opening being inwardly tapered so that the wall in the opening of the head snugly abuts the adjacent portion of the outer wall of the body, a hollow member having a part thereof located within said body and having a part thereof extending through and above the opening at the top end of said body, the outer wall of said hollow member being shaped to abut a portion of the inner wall of said body below its flange and also to abut said flange and to abut the inner wall of the body above said flange, said hollow member having a flange at the top thereof which overlies and abuts the top surface of the body and the inner lateral surface of the bottom of the head, said head being turnable relative to said body and to said hollow member, said hollow member being also made of resilient and stretchable rubber, the head of the doll having a mouth opening, an inlet member located in said mouth opening, said inlet member having an inlet channel and an outlet channel in the wall thereof, said outlet channel being connected to a bendable pipe which extends through said hollow member and below the bottom end thereof, said pipe making liquid-tight contact with the bottom end of said hollow member.

ABRAHAM M. KATZ.