Nov. 25, 1952 M. M. LOCKS ET AL 2,618,892

ODOR EXPELLING DOLL

Filed April 5, 1950

Fig. 1

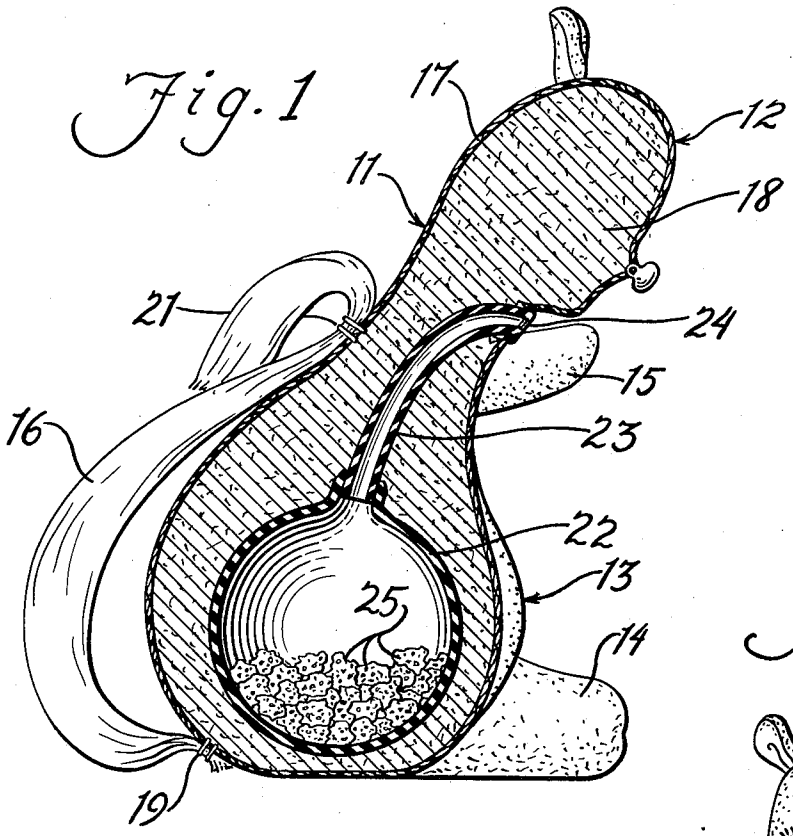


Fig. 2

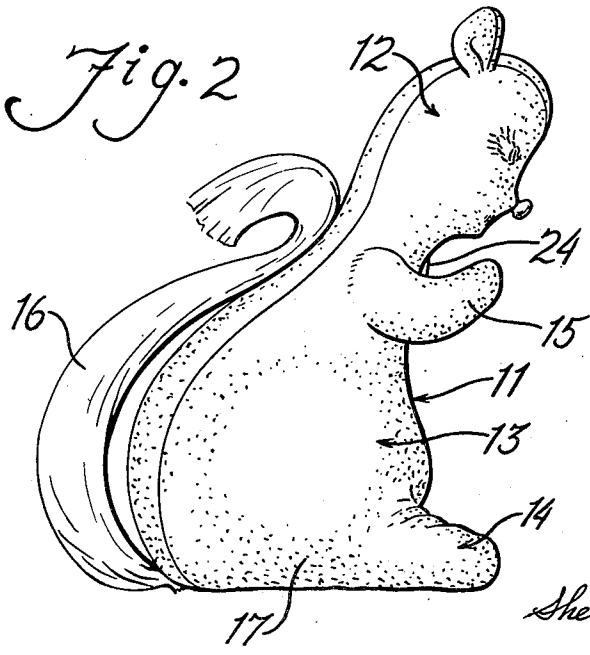
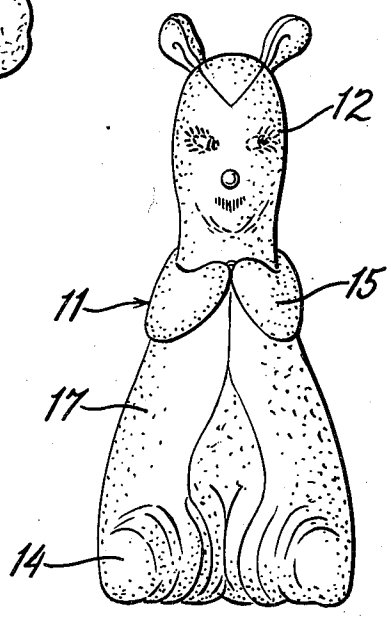


Fig. 3



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Patented Nov. 25, 1952 2,618,892

UNITED STATES PATENT OFFICE

2,618,892

ODOR EXPELLING DOLL

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Application April 5, 1950, Serial No. 154,166

4 Claims. (Cl. 46—116)

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This invention relates in general to toys, and more particularly to dolls which may be squeezed to give off a desired odor.

A principal object of the invention is to provide a toy doll with means disposed interiorly thereof for dispersing an air-borne odor into the surrounding atmosphere when the doll is squeezed.

As a specific embodiment of the invention, we have illustrated a stuffed doll in the form of a skunk having such odor-generating means disposed interiorly thereof which will emit a sweet odor from a chest aperture when the doll is squeezed. It will be understood, of course, that we do not wish to have our invention limited to any particular type of construction of the doll, to the representation of any specific animal, fish, fowl, human or imaginative form, nor to any specific location of the outlet aperture communicating with the odor-generating means.

Another important object of our invention is the provision of such odor-generatong means which, while relatively small in physical dimensions, will remain active and effective for an extremely long period of time and large number of repeated uses before becoming dormant or ineffective, and which very easily may be revitalized or again rendered effective without requiring the addition of any odor-generating material.

A further object is to employ such odor-generating means which will make use of a desired odorous substance in liquid form, but will not permit spilling, dripping or loss of the liquid from the doll, while not requiring the use of a stopper or closure member of any kind.

More specifically, these objects of the invention are attained in the embodiment herein illustrated by placing a plurality of small pieces of liquid-absorbent, spongy material (saturated with a liquid containing the desired aromatic or odorous substance in relatively high concentration) loosely into a suitable container or cavity in the interior of the doll, the cavity being substantially greater in volume than the aggregate volume of the spongy material, and having an outlet passage therefrom with a cross-sectional area much smaller than that of the container or cavity and at least smaller than those of the individual pieces of spongy material.

Numerous other objects and advantages of the invention will be apparent as it is better understood from the following description, which, when taken in connection with the accompanying drawings, discloses a preferred embodiment thereof.

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In the drawings:

Figure 1 is a vertical sectional view of a doll illustrating one embodiment of the instant invention;

Fig. 2 is a side elevational view of the doll of Fig. 1; and

Fig. 3 is a front elevation of the doll.

Referring more particularly to the drawings, reference numeral 11 indicates in general a stuffed doll in the form of a skunk seated in an upright position and comprising a head portion 12, body portion 13, rear or lower legs 14, front legs 15 and tail 16. In this particular embodiment of the invention, the head, body and legs of the doll are shown as comprising a cover member 17 of cloth, or any other suitable material, formed in separated sections sewn or otherwise secured together in such manner as is well understood in the art, and filled with any suitable stuffing material 18 to maintain the desired shape thereof while presenting a doll of pleasing appearance. The tail 16 illustrated comprises a plurality of separate strands of yarn secured together at one end at 19 at the base portion of the body 13, and similarly attached adjacent their other ends at 21 (Fig. 1) to the central back portion of the body. It will be understood that the particular doll herein illustrated comprises merely a preferred embodiment of the invention, and that the invention may be incorporated in any other suitable toy doll, such as one made up of rubber or any other desired resilient material, and representing any selected animal, fish, fowl, human or imaginative form.

Disposed interiorly of the body portion 13 and encased within the stuffing material 18 (Fig. 1) is a resilient member 22 in the form of a hollow rubber bulb. This bulb 22 has a relatively small outlet aperture within which one end of an outlet tube 23 is secured in any suitable manner. The other end of the tube 23 in this embodiment of the invention extends through the cover member 17 and is secured in any desired manner thereto to present an outlet aperture 24. While this outlet aperture 24 is illustrated herein as being disposed in the chest portion of the body 13 of the doll, it will be understood that the present invention contemplates the disposition of such outlet aperture at any other suitable point or portion of the doll. For example, the same may be placed at the base of the body 13 adjacent the point of joinder 19 of the tail, or as comprising the mouth of the doll. Similarly, the bulb 22 may be disposed in any other desired portion of the doll, such as the head 12 thereof, or

the tail 16 may be formed of some other suitable material comprising a receptacle for the bulb 22. The only criteria which must be met are that the doll be provided with an interior cavity the walls of which are compressible to effect a discharge of air therefrom upon squeezing of the adjacent portions of the doll. In the instant embodiment, such effect may be obtained by squeezing the lower portions of the body 13. If the doll be constructed of foam rubber, for example, a suitable cavity having the same functions as those of the bulb 22 and outlet tube 23 could be formed interiorly thereof. In addition to such requirement, it is desired to maintain a proper relationship between the volume and cross-sectional area of such cavity, as that provided by the bulb 22, and the cross-sectional areas of the outlet aperture 24 and the connecting tube 23, if the latter be employed. This desired relationship will be more fully explained hereafter.

Within the interior cavity in the doll, such as the bulb 22, are loosely disposed a plurality of small pieces of suitable liquid-absorbent spongy material 25, such as cellulose sponge. Either before or after their insertion into the bulb 22, these spongy pieces 25 are saturated with a liquid containing a desired aromatic or odorous substance in relatively high concentration. The pieces of spongy material 25 each are of slightly larger cross-sectional area than that of the tube 23 and outlet aperture 24, so that they may not be shaken out of the bulb 22 or through the outlet aperture 24, despite the fact that they are loosely disposed within the doll.

The reason for the pieces of spongy material 25 being disposed loosely in the bulb 22 is to prevent undesired squeezing together of these separate pieces during collapsing of the bulb 22 resulting from squeezing of the body portion of the doll. Thus the odor-generating liquid will be retained by these spongy pieces 25 to insure only air-borne odor being expelled from the interior of the doll. In other words, it is desired to prevent an atomizing of the odor-generating liquid or any expulsion thereof in tiny droplet form. The effective life of the instant odor-generating means thus is very materially increased in comparison to that which would result if an odor-producing liquid were disposed within the bulb 22 and well-known atomizing means connected thereto for effecting a discharge spray of the liquid upon squeezing of the bulb.

To further increase the effective life of the odor-generating means, it is preferred that the pieces of spongy material 25 be saturated with the desired aromatic odorous substance in a relatively high concentrated form. It has been found that a highly concentrated perfume is well adapted for this use which comprises a high percentage of the usual odorous substances, such as an essential or volatile oil, a suitable vehicle or liquid carrier, and a mixing or blending agent. A number of such small spongy pieces 25 are employed which will have an aggregate volume substantially less than the volume of the bulb 22 or other cavity provided in the interior of the doll 11, so that there will remain sufficient space in the bulb to accommodate the pieces 25 without compressing them when the bulb is squeezed to discharge the air-borne odor. The relationship of the cross-sectional area of the tube 23 and outlet aperture 24 to that of the individual pieces of spongy material 25 is not only for the purpose of preventing egress of the latter, as hereinbefore explained, but also for the purpose of eliminating the necessity of employing a stopper or closure member for the outlet aperture, either between periodic uses of the doll or during shipment or merchandising thereof. With the described arrangement, as illustrated in Fig. 1, escape of odor-bearing air from the interior of the doll, except intentional discharge thereof in response to squeezing of the doll, will be substantially prevented because of the small cross-sectional area of the tube 23 and outlet aperture 24 compared to that of the interior cavity housing the odor-producing material.

In other words, volatilization of the odorous substances from the pieces of spongy material 25 will be retarded by lack of air movement out of the cavity in the doll within which the same are disposed. Each time, however, that the doll is squeezed to compress the bulb 22, a large portion of the odor-bearing air therein will be expelled through the outlet aperture 24. Subsequent release of the squeezing pressure will permit fresh air from the surrounding atmosphere to be drawn into the bulb in response to its return to normal condition, and the odor-producing substances will volatilize to perfume each such fresh supply of air. As previously noted, the small aggregate volume of the pieces of spongy material 25 relative to the volume of the interior cavity of the doll and the loose disposition of such pieces therein effectively prevents them from being compressed to squeeze therefrom the liquid retained thereby, so that the desired odor will be produced therefrom only by volatilization of the odorous substances.

Additional advantages of this arrangement, in comparison to the filling or partial filling of the interior cavity in the doll 11 with odor-producing liquid, are that no liquid will be accidentally spilled from the doll regardless of the position to which the same is moved, the resulting odor will not be objectionably strong, and the effective life of the odor-producing means is very materially increased. Another extremely important advantage is that the pieces of spongy material 25 may readily be revitalized or again rendered effective, after becoming dormant or ineffective, without requiring the addition thereto of any odor-generating material. It has been found that such revitalizing may be effected merely by introducing through the outlet aperture 24 a small quantity of liquid, water in some instances, or the original liquid carrier, depending upon the composition of the perfume or other odor-producing liquid with which the spongy pieces 25 first were saturated.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description, and it will be apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

We claim:

1. A doll of the class described, comprising a resilient body portion having an interior cavity which may be reduced in volume by squeezing of the body portion, said cavity having only a single outlet communicating therewith from the exterior of the doll to permit discharge of air therefrom in response to such reduction in vol-

ume and said outlet having a cross-sectional area substantially less than the normal cross-sectional area of said cavity, and a plurality of pieces of spongy material loosely disposed in said cavity for retaining a desired odor-generating liquid, each said piece of spongy material having a cross-sectional area greater than that of said outlet to prevent egress thereof from said cavity, and the aggregate volume of said pieces of spongy material being somewhat less than the reduced volume of said cavity when the doll is squeezed to avoid undesirable resulting compression of the pieces of spongy material.

2. A doll according to claim 1, wherein said interior cavity is defined by a hollow bulb of resilient material disposed interiorly of a portion of the doll.

3. A doll according to claim 2, wherein said outlet comprises an open-ended tube attached at one end to said hollow bulb and extending through an outer portion of the doll at its other end.

4. A doll of the class described, comprising a resilient body portion having an interior cavity which may be reduced in volume by squeezing of said body portion, said cavity having only a single outlet interconnecting said cavity and the ambient air and said outlet having a cross-sectional area substantially less than the normal cross-sectional area of said cavity, and absorbent means disposed in said cavity for retaining a desired odor-generating liquid, the normal volume of said absorbent means being less than the reduced volume of said cavity, when the doll is squeezed in normal use, to avoid undesirable compression of said absorbent means.

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