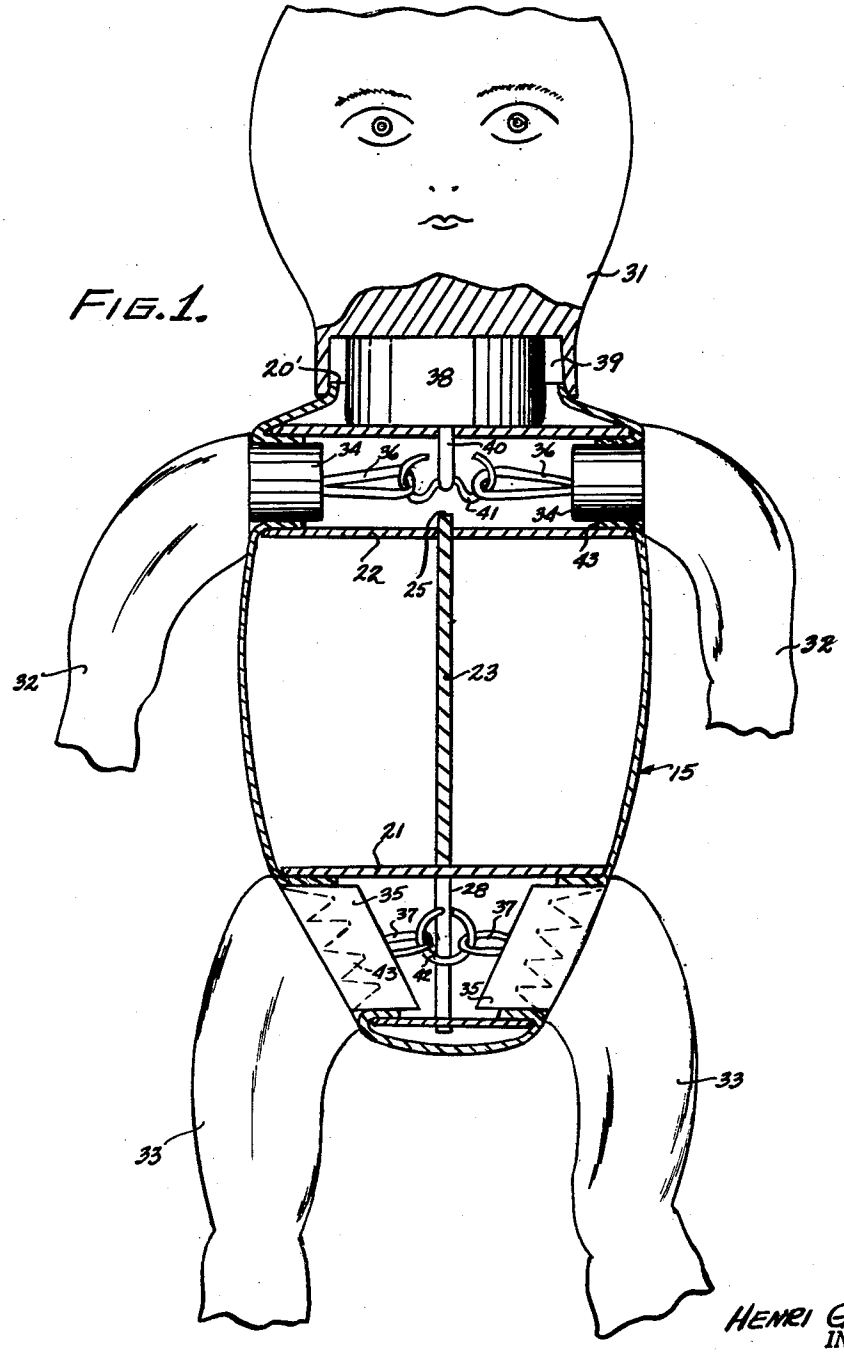
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DOLL AND THE LIKE

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FIG. 1.



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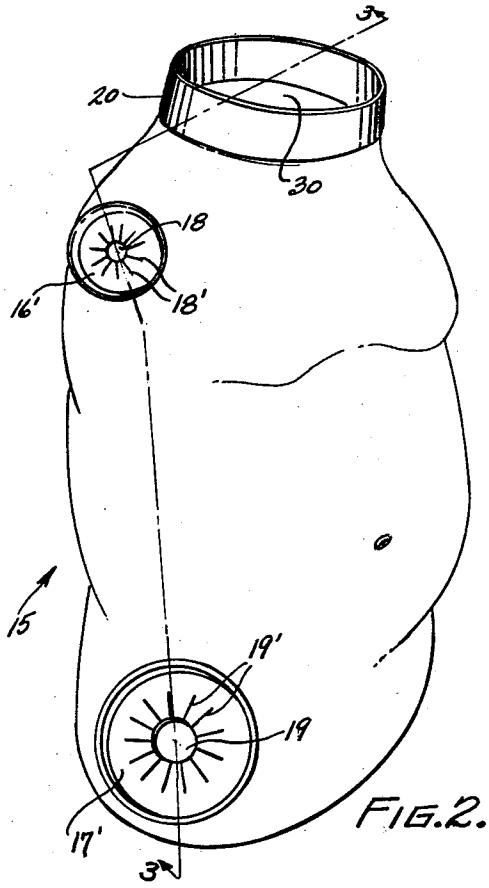


FIG. 2.

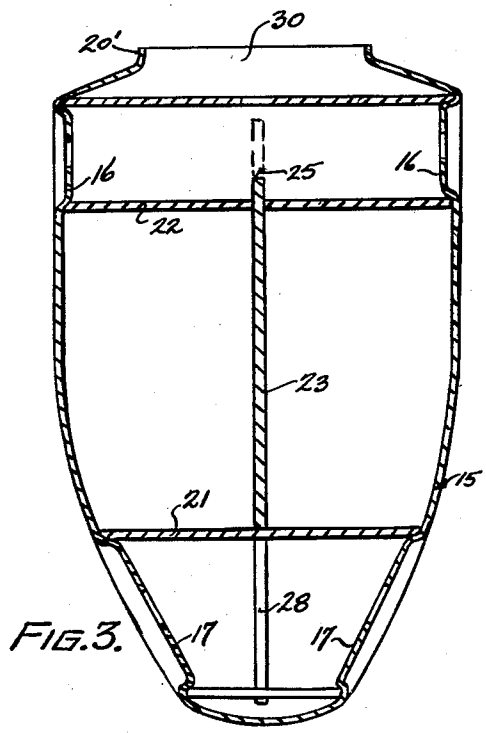


FIG. 3.

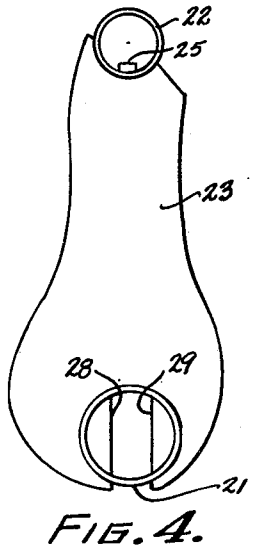


FIG. 4.

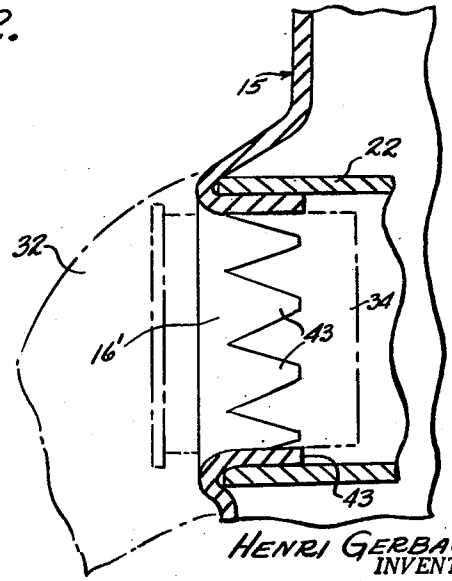


FIG. 5.

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FIG. 6.

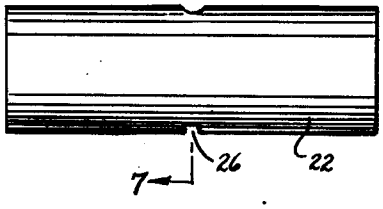


FIG. 7.

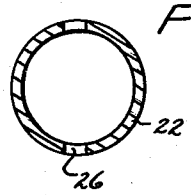
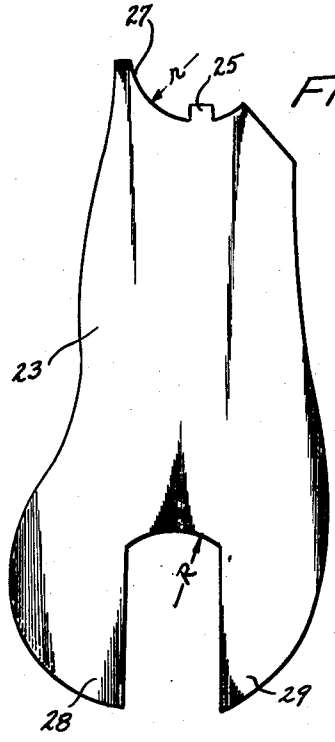


FIG. 8.



FIG. 9.



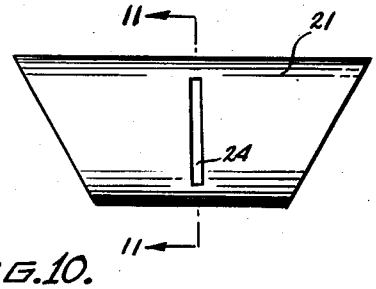
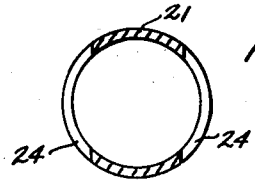


FIG. 10.

FIG. 11.



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Patented June 3, 1952 2,598,781

UNITED STATES PATENT OFFICE

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DOLL AND THE LIKE

Henri Gerbaud, New York, N. Y.

Application February 27, 1951, Serial No. 212,925

10 Claims. (Cl. 46—161)

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The present invention relates to dolls and manikins in human and animal form, and particularly to the type having movable head and limbs.

The principal object of this invention is to provide a novel and improved doll structure including an initially collapsible torso which is a thin-walled hollow shell made of a material having resilient quality, as for instance of vinyl plastic, rubber or its substitutes, furnished with interior framework made up of engageable components insertable into the torso shell, to afford a suitable rigid support for the mounting of the head and the limbs.

Another object hereof is to provide a novel and improved doll construction of the character mentioned, wherein the framework spoken of, is engaged in proper place by and within the torso shell.

A further object hereof is to provide a novel and improved doll structure of the type described, affording good frictional hold of the limbs in any set position on the torso member, so that their arrangement remains unchanged except when intentionally rearranged.

Still a further object of this invention is to provide a novel and improved doll construction, which is reasonably cheap, easy to manufacture and efficient in carrying out the purposes for which it is designed.

Other objects and advantages will become apparent as this disclosure proceeds.

In the accompanying drawings forming part of this specification, similar characters of reference indicate corresponding parts in all the views.

Fig. 1 is the front view of a doll embodying the teachings of this invention, shown partly in section.

Fig. 2 is a perspective view of the torso member after certain openings have been made at the arm and leg socket regions, as will be explained.

Fig. 3 is a section taken at lines 3—3 in Fig. 2, after the framework has been fitted within the torso member.

Fig. 4 shows a side view of the framework in assembled condition, drawn to a reduced scale.

Fig. 5 is an enlarged fragmentary sectional view of the arm region of the assembled doll of Fig. 1.

Fig. 6, Fig. 8 and Fig. 10 are front views of the three components comprising the framework shown in Fig. 4, employed in the embodiment described herein.

Fig. 7 is a section taken at lines 7—7 in Fig. 6.

Fig. 9 is a side view of Fig. 8.

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Fig. 11 is a section taken at line 11—11 in Fig. 10.

In the drawings, the numeral 15 designates generally the torso member. It is a thin-walled molded shell of a material having resilient and some stretchable quality, as for instance of vinyl plastic, rubber or the like. It comes closed from the mold, except for the opening at neck region, and has inward bosses at the limb regions. These inward bosses at arm region, are denoted by the numeral 16, and by the numeral 17 at the leg regions.

To prepare the torso for use, the webs 16' across the arm regions and the webs 17' across the leg regions, are cut to provide therein the holes 18 and 19 respectively, and the series of radial slits 18' and 19' respectively, starting at such holes and extending but part way towards the perimeter of such webs respectively. The collar 20 is trimmed down as at 20'.

The framework shown assembled in Fig. 4, consists of the tubular member 21, whose ends fit telescopically on the bosses 17 respectively, the tubular member 22, whose ends fit telescopically on the bosses 16 respectively, and the connecting piece 23 which is intermediate such tubular members. Piece 23 is of dimension and shape to fit between front and back of the torso member 15, is bifurcated at its bottom end, so that the distance between its tines permits snug fit through the slots 24 in tubular member 21, and at its upper end is provided with an upwardly extending lug 25 which fits snugly into the rectangular hole 26 through the wall of the tubular member 22, and is provided with the concave arcual seat 27 for the said tubular member 22. It is practical to make radius r equal to the outside radius of tube 22, and to have radius R equal to the outside radius of the tube 21.

After the torso member 15 has been prepared for use as stated, the framework is inserted therein piece by piece through the neck opening 30. First, the tubular piece 21 is put in, and set so that its ends fit on the bosses 17 respectively. The slots 24 are upright, and said member 21 is shaped to fit the space it occupies within the torso member 15 so as to conform to the torso's interior. Next, the part 23 is put in so that its tines 28 and 29 are positioned through the slots 24. Finally, the tubular member 22 is put in, and set so that its ends fit on the bosses 16, and so that lug 25 is within the slot or non-circular hole 26. All frame members being of rigid material, they are now engaged as a unitary structure, and the assembly thus far described, is now ready

to have the head 31 and the limbs 32 and 33, mounted thereon.

It is evident that during insertion and assembly of the frame parts, the torso member need be stretched and distorted to accommodate such operation. This is possible, because of the nature of the material it is made of. The torso being elastic to a sufficient extent to permit the necessary manipulation, returns to its original molded form.

Each arm 32 and each leg 33, at socket region, is provided with a laterally extending and reduced boss, namely those denoted by the numerals 34 and 35 respectively. From each such boss there extends outwardly an elastic loop, here designated by the numerals 36 and 37 respectively. The head 31 has the downwardly extending and reduced boss 38, forming the annular channel 39 in the head mass. This boss 38 also has the elastic loop 40 extending downwardly therefrom.

It is to be noted that when the arms 32 and the legs 33 are mounted on the torso member 15, each plug 34 upon being inserted into the tubular member 22, will force the web 16' into said tube to form a frictional bushing around said plug or boss, as shown in Figs. 1 and 5. A similar bushing comes into existence when the plugs 35 on the legs 33, are inserted into the tubular member 21. Of course, the diameters of the respective plugs are such as to produce frictional engagement with said bushings formed of the webs at socket regions. A mounted limb turned to any position about the axis of its related mounting plug, will remain set until manually moved to another position.

All elastic loops 36, 37 and 40, are associated as shown on the respective hooks 41 and 42. So assembled, all said loops are in taut condition as is usual in the art. The height of the head's mounting plug 38 is such that when the doll is assembled, such plug shall rest on the frame member 22, and shall be sufficient so that the torso at collar region is not distorted due to the tautness in the elastic loop 40.

The width of the unslit perimetral lane of the webs 16' and 17' should be little enough to permit their insertion into the tubular frame members without much effort. The sectors as 43 of said webs, formed by the slits 18' and 19', will separate as appears in Fig. 5, when the limbs are mounted on the torso as explained.

Before the head is put on, the torso shell 15 is filled with a suitable stuffing, which in most cases is necessary.

This invention is capable of numerous forms and various applications without departing from the essential features herein disclosed. It is therefore intended and desired that the embodiment shown herein shall be deemed illustrative and not restrictive and that the patent shall cover all patentable novelty herein set forth; reference being had to the following claims rather than to the specific description herein, to indicate the scope of this invention.

I claim.

1. In a doll or the like, a torso-shaped shell of a material having resilient quality, a head member carried thereon; said shell being provided with an opening through which frame components may be inserted therein, a plurality of components inserted into said torso-shaped shell and set in engaging relation to form a rigid unitary frame structure therein engaging the interior surface of said shell; said unitary frame structure presenting the ends of tubes at the respective limb regions of the torso-shaped shell with the axes thereof intersecting the shell wall at such regions respectively; said tube ends offering support for a limb at each limb region of the torso-shaped shell; the wall portion of the torso-shaped shell at each limb region having an opening of less area than the hole of the tube end adjacent said wall portion, permitting the insertion of a limb end into each of said tube ends respectively, a limb at each limb region positioned with one end through said opening at said limb region and extending into said tube end, whereby each said wall portion is formed as a bushing on the limb end within said tube end; said bushing being in snug fit with the interior surface of said tube end in which it is positioned and with said limb end which extends therein and means within said torso-shaped shell holding the limbs connected to said shell.

2. An article as defined in claim 1, including means to limit the extent to which the limb can extend into the mentioned tubular end.

3. An article as defined in claim 1, wherein the limb end which extends into the tubular end is of reduced section so that the limb can extend into the tubular member only the length of said reduced section.

4. An article as defined in claim 1, wherein the opening at the limb region is formed by a plurality of slits in said torso wall portion.

5. An article as defined in claim 1, wherein the opening at the limb region is formed of a plurality of radical slits in said torso wall portion; said slits being in intersecting relation.

6. An article as defined in claim 5, wherein the area determined by said intersecting radial slits is less than the area of the hole of the tubular end adjacent thereto.

7. In a doll or the like, a torso-shaped shell of a material having resilient quality a head member carried thereon; said shell being provided with an opening and formed at limb regions with an internal boss adapted to receive the end of a tubular member therein, a first tubular member inserted through said opening into the torso shell, positioned with its ends telescopically set onto one pair of opposite bosses respectively, a second tubular member inserted through said opening into the torso shell, positioned with its ends telescopically set onto another pair of opposite bosses respectively, a member connecting said tubular members, inserted into the torso shell, positioned between and contacting said tubular members; said connecting and tubular members being provided with cooperative means to hold said three members together in a predetermined relation and limbs mounted one at each limb region of the torso shell.

8. An article as defined in claim 7, wherein the first tubular member is provided with opposite slots therethrough in a plane transverse its longitudinal axis, wherein the other tubular member is provided with a non-circular hole opposite the first tubular member and wherein the connecting member is provided with a pair of tines at one end and a non-circular lug at its other end; said tines fitting respectively into said slots and said lug fitting within said non-circular hole.

9. In a doll or the like, a torso shaped shell of a material having resilient quality, a head member mounted thereon, a tubular member positioned within the shell and extending between two limb regions; the wall portion of the torso shell at each such limb region having an opening of less area than the hole of the tube end adjacent said

wall portion, permitting the insertion of a limb end into said tube, limbs positioned one with one end through each of said openings respectively and extending into said tube, whereby each said wall portion is formed as a bushing on the limb end within a tube end; each said bushing being in snug fit with the interior surface of the tube end in which it is positioned and with said limb end which extends therein and means within the torso-shaped shell holding the limbs connected to said shell.

10. An article as defined in claim 9, wherein each opening at limb region is formed of a plurality of intersecting radial slits in said torso wall portion.

HENRI GERBAUD.

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