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J. KARTON
DOLL JOINT CONSTRUCTION FOR COOPERATION WITH
HAIR ROOTING MACHINE
Filed Feb. 27, 1964

3,273,280

Fig. 1.

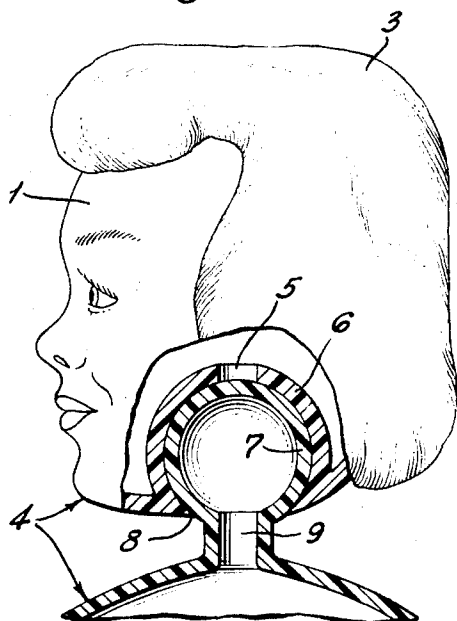


Fig. 2.

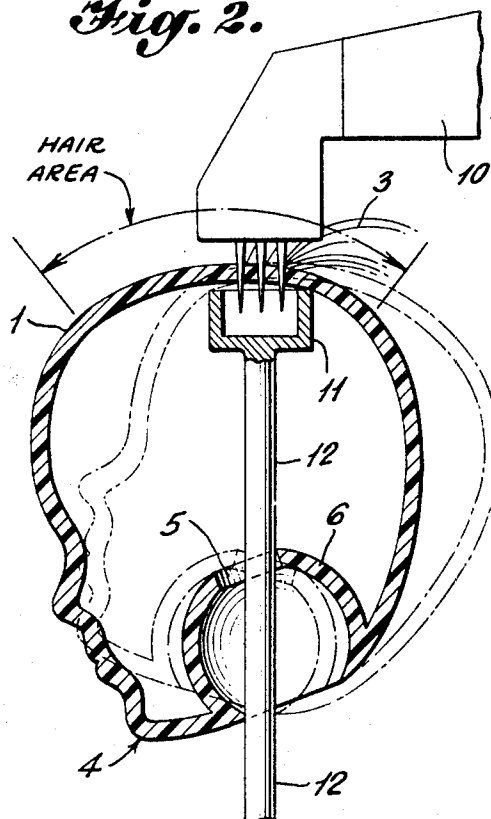


Fig. 3.

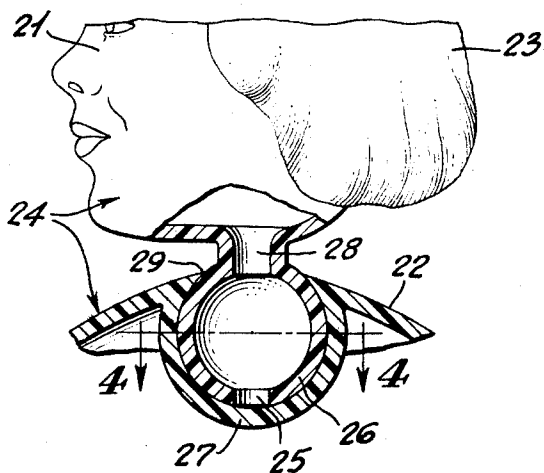
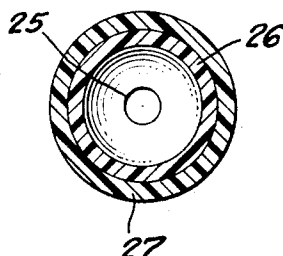


Fig. 4.



INVENTOR

Joseph Karton

BY

Jay M. Cantor

ATTORNEY

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DOLL JOINT CONSTRUCTION FOR COOPERATION WITH HAIR ROOTING MACHINE

Joseph Karton, Newark, N.J., assignor to Deluxe Reading Corporation, Elizabeth, N.J., a corporation of New Jersey

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1 Claim. (Cl. 46-16)

This invention relates to a joint construction and more particularly to a joint construction for toys, dolls, and the like which cooperates with a hair rooting machine or the like for affixing hair to the toy. More specifically, this invention relates to improvements in dolls and toys, wherein dolls or toys of simple construction having a vinyl resin or plastic molded rooted hair head or limb member or the like is provided with an integral ball or socket joint, requiring no elastic or spring connections by means of which such joints are maintained in position but enabled to be moved or turned.

So far as I am aware, the combination of a resilient ball and socket type joint without elastic or spring fasteners and a doll or toy member with rooted hair has not heretofore been manufactured for dolls and the like. The process of the manufacture of a device disclosed herein, wherein a rooting device operating from within the hollow of the head member is provided to secure rooting of the hair to the head member, is found to be eminently suitable for the above purpose, resulting in a doll or toy head, limb or torso member relatively inexpensive to produce, capable of movement and with permanently secured rooted hair. Hair rooting devices, per se, have been used in the prior art (U.S. Patent No. 3,109,396); however, such hair rooting devices have never been incorporated for securing hair to the head of a doll having ball and socket type joints. This has caused a serious problem and substantially reduced the use of the relatively inexpensive ball and socket type joint in dolls wherein it is desirable that hair be permanently secured to the head member.

The above mentioned problem of the prior art dolls is overcome in accordance with the present invention, wherein a molded movable member having an integral resilient ball and socket type joint is so produced with an aperture as to admit the post of a hair rooting machine into the cavity of the resilient member permitting the free manipulation of the limb member over the fixed post of the rooting machine. The resiliency of the ball or socket member integral with the head member allows an additional degree of free movement of the rooting machine post. The resiliency of the ball or socket is such that the ball or socket, as the case may be, will be retained within or retain a second socket or ball to provide a joint to allow freedom of movement along one great circle and all great circles normal thereto. The aperture for receiving the rooting machine post is hidden in the joint upon final assembly of the doll or toy.

It is therefore an object of this invention to provide a ball and socket type joint for a doll, capable of accommodating a device for producing a doll head with rooted hair.

It is a further object of this invention to provide a doll joint capable of movement along a first great circle and all great circles perpendicular thereto, capable of accommodating a device for producing a doll head with rooted hair.

It is a still further object of this invention to provide a resilient socket member integral with a doll head and having an aperture therein for receiving a hair rooting device.

It is a yet further object of this invention to provide a ball and socket jointed doll having rooted hair, freedom of movement, ease of assembly, mechanical strength and low cost.

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The above objects and still further objects of the invention will become apparent to those skilled in the art when taken in conjunction with the following detailed description of the preferred embodiments of the invention, which are provided by way of example and not limitation, wherein:

FIGURE 1 is a view, partially in elevation, partially in section, of a first embodiment of the invention;

FIGURE 2 is a view in section of the first embodiment of the invention including a rooting machine in operating position;

FIGURE 3 is a view in section of a second embodiment of the invention; and

FIGURE 4 is a view taken along the line 4-4 of FIGURE 3.

Referring to FIGURE 1, there is shown a portion of a doll including a head member 1 and a portion of a torso member. The head and torso members are hollow and formed of vinyl resin, plastic or the like, by a process of molding or the like from a shaped material 4. The head member 1 includes a resilient socket shaped member 6 defining an aperture 5 therein at the region thereof most remote from a constricted portion 8 of the socket, the constricted portion lying at the extreme ends of the socket. The head member is covered with hair 3 (to be explained later).

The torso member includes a circular ball portion 7 for receiving the socket shaped member 6, the socket being of substantially the same shape as the ball to provide an abutting fit therewith. The ball member includes a constricted portion 9 at the outermost portion thereof of relatively rigid material for entry into said socket member to and provide a rotatable locking fit with the ball in the socket.

The ball member 7 is assembled into the mating socket member 6 by snapping the ball member snugly into the socket member.

Referring to FIGURE 2, there is set forth a cross-section of the doll head member of FIGURE 1, further showing a hair rooting machine in operating position. The rooting machine includes a hair-providing member 10 which applies hair to the doll head and allows the hair to penetrate through the head material 4 into the interior cavity portion thereof. A work support post 11 for the hair rooting device is forced through the resilient material surrounding aperture 5 by means of a shaft 12 to secure the hair within the doll head. The head member 1 can be moved about at various angles (as shown in phantom) to allow the rooting machine work support member 11 to cooperate with the rooting machine member 10 over the entire skull portion to permanently secure the hair 3 to the doll head member.

Rather than forming the socket as part of the head member and the ball as part of the torso member, the arrangement can be reversed.

Referring to FIGURE 3, there is shown a portion of a doll including a head member 21 and a portion of a torso member 22. The head and torso members are hollow and formed by a process of molding or the like from a shaped material 24. The head member 21 includes a resilient ball shaped member 26 defining an aperture 25 therein at the region thereof most remote from a constricted portion 28 of the ball, the constricted portion lying between the ball and the remainder of the head member 21. The head member is covered with hair 23.

The torso member 22 includes a circular socket portion 27 for receiving the ball shaped member 26, the socket being of substantially the same shape as the ball to provide an abutting fit therewith. The socket member includes a constricted portion 29 at the outermost portion thereof of relatively rigid material for receiving

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the said ball member therethrough and provides a rotatably locking fit with the ball in the socket.

The ball member 26 is assembled into the mating socket member 27 by snapping the ball member snugly into the socket member.

FIGURE 4 is a view along the line 4—4 of FIGURE 3, showing the aperture 25, the ball shaped member 26 and the socket shaped member 27.

Though the invention has been described with regard to two preferred embodiments, many other changes, variations and modifications will immediately become obvious to those skilled in the art which fall within the scope of the present invention. It is therefore the intention that the following claims be interpreted as broadly as possible in view of the prior art to encompass any such changes, variations and modifications.

What is claimed is:

A doll comprising a resilient head member having rooted hair secured therein, a torso member, and means securing said members together for universal movement, said means comprising a hollow ball element integral with one of said members, a hollow socket element receiving

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the ball element integral with the other of said members, and aperture means in the element integral with the head for allowing access of a support post for a hair rooting device into the head, the element integral with the head being of resilient material and the other element being of relatively rigid material, the ball fitting snugly into the socket element to provide a rotatable locking fit of the head member on the torso member and the socket element being formed in the head.

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RICHARD C. PINKHAM, *Primary Examiner*.

F. BARRY SHAY, *Examiner*.