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I. A. ALBERT

3,500,578

FLAT TOY FIGURE WITH ROOTED HAIR

Filed Feb. 14, 1969

FIG. 1

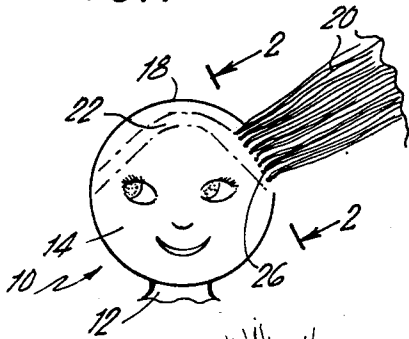


FIG. 2

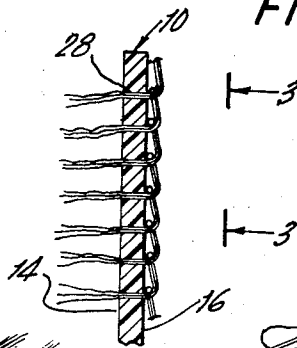


FIG. 3

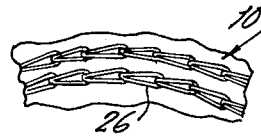


FIG. 4

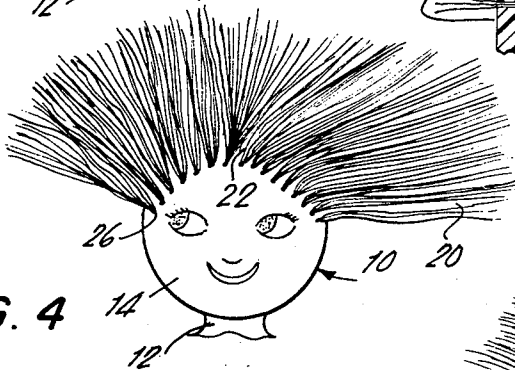


FIG. 5

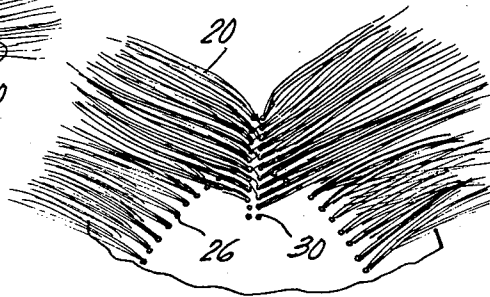


FIG. 6

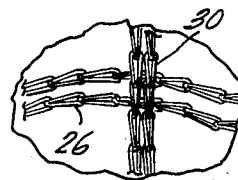


FIG. 8

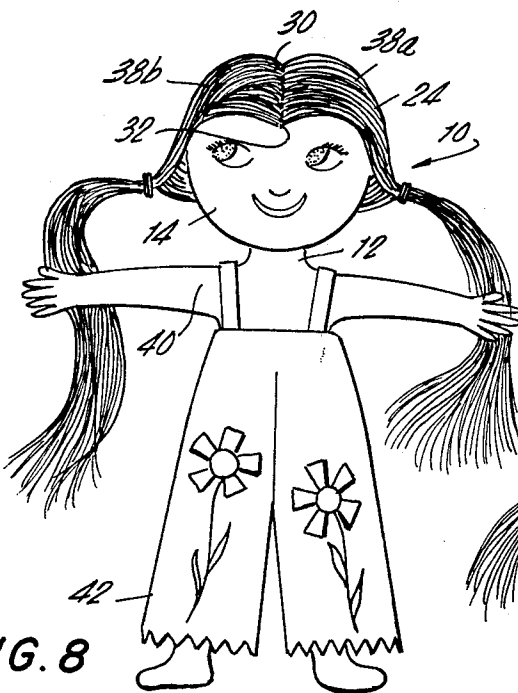
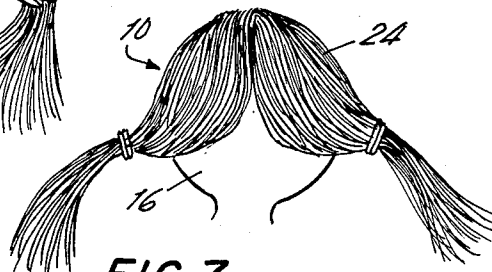


FIG. 7



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FLAT TOY FIGURE WITH ROOTED HAIR
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9 Claims

ABSTRACT OF THE DISCLOSURE

A hair assembly is formed on a flat toy figure having a head formed of generally flat material by rooting hair-like fibers in a curved row parallel to the upper edge of the head, rooting at least one additional row of hair-like fibers in a generally straight line extending transversely of and downwardly from the curved row with the fibers of the additional row extending outwardly from the front surface of the head, parting the fibers of the additional row and extending portions thereof about opposite sides of the head and the head's upper edge and forming the hair-like fibers over the rear surface of the head.

This invention relates generally to children's play toys and more specifically to a rooted hair construction for flat toy figures and a process for forming the same.

A child's toy doll typically includes a hollow head having clusters of the hair rooted therein by one of several rooting or stitching processes which are well known in the toy making art. Representative rooting processes for securing hair to the head of conventional dolls are disclosed, for example, in Patent 2,636,460 to M. Siederman, Patent 3,225,720 to A. Klassert, and in Patent 2,670,570 to M. S. Gnaizda. In such conventional dolls heads, the hair is typically rooted into the skull with the stitches being formed on the interior surface of the head so that they are not visible. In a flat toy figure wherein the figure's head is formed of generally flat material the stitches created by the usual hair rooting processes would, without special provisions, be visible on the rear surface of the head.

The present invention concerns a method of rooting a hair assembly to the head of a flat figure, such as that shown in the drawing, in a secure and attractive manner and without leaving exposed stitches which detract from the appearance of the figure. It is an object of the present invention to root hair securely to the skull of a flat toy figure without exposing the stitches to view. A further object is the creation of an attractive hair design for a flat doll which makes a pleasant appearance with a minimal amount of rooted hair and produces an attractive result at a low manufacturing cost. Generally, it is desired to produce an attractive and flexible hair assembly.

These and other objects are accomplished in accordance with the present invention by forming a hair assembly on the head of a toy figure by the following steps:

(1) Rooting at least one curved row of hair-like fibers into the head substantially parallel to the head's upper edge,

(2) Rooting at least one additional row of hair-like fibers into the head along a generally straight line extending transversely of at least one curved row of hair-like fibers with the fibers of the additional row or rows extending outwardly from the front surface of the head,

(3) Parting the fibers of the additional row or rows and extending portions thereof toward opposite sides of the head and over the rear surface of the head, and

(4) Forming the fibers of the straight row or rows and the curved rows over the rear surface of the head.

An exemplary product of the process is a toy figure comprising a body, a head and a hair assembly wherein the hair assembly comprises at least one curved row of hair-like fibers attached to the head substantially parallel to the head's upper edge, at least one generally straight row of hair-like fibers attached to the head in a line extending transversely of the curved row of fibers, the hair-like fibers of the straight row extending outwardly from the front surface of the head and being parted with portions thereof extending toward opposite sides of the head and being folded thereabout and over the rear surface of the head.

The above brief description as well as further objects, features and advantages of the present invention will be more fully appreciated by reference to the following detailed description of a presently preferred embodiment thereof when taken in conjunction with the attached drawing wherein:

FIG. 1 is a front elevation of the head of a flat figure showing the location of three curved rows of hair-like fibers to be rooted into the head during the first step of the process;

FIG. 2 is a sectional view taken along line 2—2 of FIG. 1 showing a typical chain stitch pattern;

FIG. 3 is a fractional view taken along line 3—3 of FIG. 2 showing the chain stitch pattern on the rear surface of the doll head;

FIG. 4 is a front elevation of the flat head with the curved rows of hair fully rooted;

FIG. 5 is a fractional front view of the upper portion of the figure head showing the generally straight rows of hair stitched into the skull and parted to extend toward opposite sides of the head;

FIG. 6 is a fractional rear elevation of the head at the point where the stitches of the generally straight rows cross the stitches of the curved rows;

FIG. 7 is a rear elevation of the head showing the hair secured over the rear surface of the head;

FIG. 8 is a front elevation of a completed flat figure.

Referring to the drawing, there is generally shown the head 10 of a toy figure which typically also includes a neck 12 beneath head 10 for supporting the head on a toy figure body (see FIG. 8). Head 10 is formed of a generally flat section or flexible material such as plastisol and has a front surface 14, a rear surface 16 and an upper edge 18. The head 10 may be reinforced by internal wires. In the illustrated doll, the body is constructed of the same materials. The front surface of the toy figure head 10 is preferably molded with slight contours simulating the features of a human face; for added emphasis, the facial features are painted onto the front surface 14.

In accordance with the present method, clusters of hair-like fiber 20 of saran or other suitable material are rooted in the skull region 22 of head 10 by any one of several well known rooting processes. The fibers may be of any desired length, but a length equal to or larger than the head diameter has been found to be attractive. One such suitable rooting process is the chain stitching method disclosed in the Klassert patent referred to above; another is the method shown in the previously reference Seiderman patent. It is to be understood that the present invention does not relate to the specific means by which the individual clusters of hair-like fibers are secured to the head, but rather the method by which the hair assembly 24 is formed on the head and the resulting hair construction.

In the first step of the presently preferred embodiment of the present method, clusters of hair-like fibers are stitched into the skull region 22 of head 10 in one or more curved rows 26 parallel to the head upper edge 18. Two such rows have been formed to provide adequate

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density of fibers. The stitching is done with the stitches being formed on the rear surface of the head and the fibers 20 being extended outwardly from the front surface 14 of the head. However, it is to be understood that in an alternate arrangement, the fibers of the curved rows may be extended outwardly from the rear surface of the head.

In FIG. 1, the curved rows of fibers are shown partially completed. FIG. 2 shows the chain stitching of each row of fibers in cross-section and FIG. 3 shows two such curved rows of stitches formed on the rear surface 16 of the head. It will be seen from FIGS. 2 and 3 that each cluster 28 of fibers 20 extends through a hole in the head from front surface 14 to rear surface 16, out surface 16, is looped around the next cluster of fibers in the row and extends back through the head from surface 16 toward surface 14 and outwardly from front surface 14. Apparatus for rooting the individual clusters of hair are shown in the above reference patents.

FIG. 4 shows the head at the completion of the first step of the process with several curved rows of hair rooted to the skull region 22 adjacent to the head's upper edge 18.

In the second step of the process, at least one straight row 30 of clusters of hair-like fibers is rooted into head 10 in a line extending downwardly from the upper edge 18 of head 10 to a point 32 (see FIG. 8) on the forehead of the figure. This point corresponds approximately to the forwardmost part of the figure's hair line and should be selected accordingly. The hair-like fibers of straight row 30 extend outwardly from the front surface 14 of head 10 with the stitches being formed on the rear surface 16 of the head. It has been found that two such straight rows of stitching using several strands for each stitch provide sufficient hair bulk. FIG. 5 shows two straight rows of stitches on the front surface of the head and FIG. 6 shows two straight rows of stitches on the rear surface 16.

In the third step of the process, the hair assembly is parted by dividing the hair-like fibers of the straight rows 30 and extending portions thereof toward opposite sides of head 10 and toward the upper edge 18 of the head. Preferably the fibers are not parted between two straight rows, but the fibers of the straight rows are mixed, some fibers of each row going in each direction so as to create a natural parted hair appearance. At the same time, the fibers of the curved rows are extended toward the upper edge 18 of the head and are bent about the upper edge and over the rear surface 16 of the head. The fibers of the straight rows are also bent about the edge of the head and brought over the rear surface of the head as shown in FIG. 7.

In the final step of the process, the fibers of the generally straight row 30 and of the curved row 26 are both formed over the rear surface 16 of the head to cover the stitches of curved and straight rows which would otherwise be visible on the rear surface 16 of the head. One method of forming the fibers over the rear surface is to adhesively secure the fibers to one another and to the stitches of the straight rows on the rear surface of the head. Another is to condition the fibers so that they assume a shape which covers rear surface 16. Such conditioning may be accomplished by heat treating the fibers.

A flat toy figure 36 with a hair assembly rooted in accordance with the present invention is shown in FIG. 8. The toy figure includes a body section 34 having arms 40, legs 42, and a neck 12, and a flat head 10 having a front surface 14, a rear surface 16, and an upper edge 18. The head 10 includes a rooted hair assembly which comprises at least one curved row of hair-like fibers 26 rooted into the head substantially parallel to upper edge 18 and several additional rows of hairlike fibers 30 rooted in a generally straight line extending downwardly from curved row 26 to the forward end of the figure's hair line at point 32. The fibers of the straight row 30 extend outwardly from the front surface 14 of the head and are parted with

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portions of the fibers 38a and 38b extending toward opposite sides of the head and folded about the head. The fibers extending from the curved rows 26 are folded about upper edge 18 and are adhesively secured together with the fibers of the straight rows overlaying the rear surface of the head as shown in FIG. 7.

It is to be understood that the above described arrangement is merely an example of the application of the principles of the present invention. Additional arrangements may be devised by those skilled in the art without departing from the spirit and scope of the present invention.

What is claimed is:

1. A toy figure comprising a body, a flat head attached to said body, said head being formed of generally flat material and having a front surface, a rear surface, and an upper edge, and a hair assembly rooted in said head, said hair assembly comprising at least one curved row of hair-like fibers rooted in said head substantially parallel to said upper edge and at least one substantially straight row of hair-like fibers rooted in said head in a line extending transversely of said curved row, the hair-like fibers of said straight row extending outwardly from the front surface of said head and being parted with portions thereof extending toward opposite sides of said head and being folded thereabout and over the rear surface of said head.

2. A toy figure as defined in claim 1 wherein said at least one substantially straight row of hair-like fibers is stitched into said head, said stitches being formed at the rear surface of said head.

3. A toy figure as defined in claim 2 wherein said at least one curved row of hair-like fibers is stitched into said head with the stitches formed on said rear surface thereof and the fibers protruding outwardly from the front surface thereof, the fibers of said at least one curved row extending toward said upper edge of said head and being folded thereabout.

4. A toy figure as defined in claim 1 wherein said hair-like fibers are adhesively secured together, overlaying the rear surface of said head.

5. A method of forming a hair assembly on a flat head of a toy figure, said head being formed of generally flat material and including a front surface, a rear surface and an upper edge, comprising the steps of:

(a) rooting at least one curved row of hair-like fibers into said head substantially parallel to said upper edge;

(b) rooting at least one additional row of hair-like fibers into said head along a generally straight line extending transversely of said at least one curved row with the fibers of said at least one additional row extending outwardly from the front surface of said head;

(c) parting the fibers of said at least one additional row and extending portions thereof toward opposite sides of said head; and

(d) forming the fibers of said at least one straight row and said at least one curved row over the rear surface of said head.

6. A method of forming a hair assembly as defined in claim 5 wherein step (b) comprises the step of stitching said at least one additional row of hair-like fibers into said head with the stitches of said straight row being formed on the rear surface of said head.

7. A method of forming a hair assembly as defined in claim 6 wherein step (a) comprises the step of stitching said at least one curved row of hair-like fibers into said head with the stitches of said curved row being formed on the rear surface of said head and the hair-like fibers of said curved row extending outwardly from the front surface of said head.

8. A method of forming a hair assembly as defined in claim 7 wherein step (d) comprises the step of adhesively securing the hair of said at least one straight row and said

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at least one curved row together to cover the back surface of said head.

9. A toy figure comprising a body formed of a generally flexible material reinforced by internal wire members and a flat head including a front surface having human features formed thereon, a rear surface and an upper edge, and a hair assembly stitched in said head, said hair assembly comprising at least one curved row of hair-like fibers substantially parallel to said upper edge, forming a hair line for said hair assembly on said toy figure, said hair-like fibers having a line of exposed stitches formed on said rear surface, said hair-like fibers protruding outwardly from said front surface along said hair line, and upwardly to said upper edge forming a raised portion of said hair assembly over said front surface and complementary to said human features, said fibers being

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folded over said upper edge and being positioned over said exposed line of stitches on said rear surface covering said line of stitches from view.

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