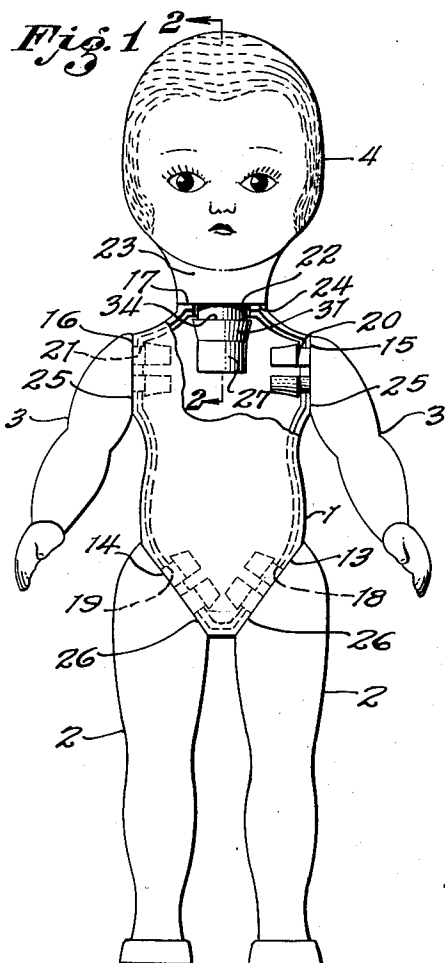
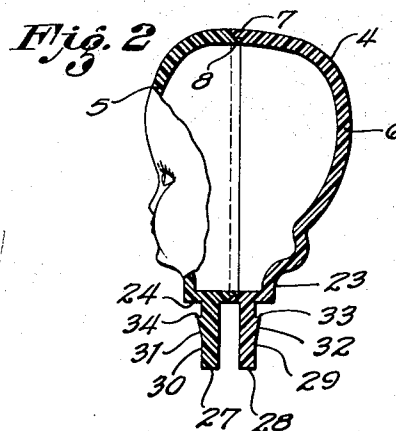
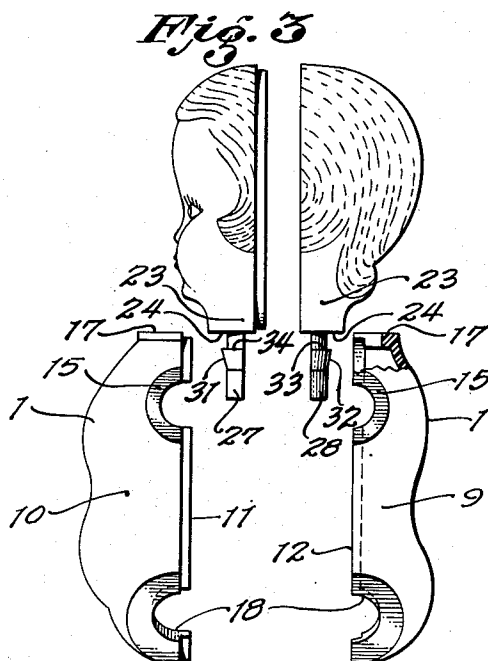


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DOLL CONSTRUCTION
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DOLL CONSTRUCTION

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1

The present invention relates to doll construction of a type which allows the head, arms and legs to be readily attached to a torso, and in such a manner as to permit relative turning movement of the members.

The average child prefers a doll which has movable arms, legs and head, but such a construction usually entails expensive assembly, and is not always satisfactory when the doll is roughly handled in that the parts may become disconnected.

The present invention has for an object a doll construction wherein various members are readily secured to the torso, while at the same time permitting swinging movement of said members relative to the torso.

A further object is a doll construction which is readily assembled, which will stand rough usage without breakage, is light of weight and is generally superior to doll constructions now known to the inventor.

With the above-mentioned and other objects in view, the invention consists in the novel and useful provision, formation, construction, and association and relative arrangement of parts, members and features, all as shown in one embodiment in the accompanying drawing described generally and more particularly pointed out in the claims.

In the drawing,

Figure 1 is a fragmentary front elevation, partly in section, of a doll embodying the invention;

Figure 2 is a sectional view on the line 2—2 of Figure 1; and

Figure 3 is a detached view of certain elements of the invention.

Referring now with particularity to the drawing, the doll shown in Figure 1 includes a torso 1, legs 2, arms 3, and a head 4. The arms, legs and head are articulated relative to the torso 1. The torso and head are hollow and preferably formed of cooperating halves. Thus, in Figure 2, the head 4 is formed of two parts 5 and 6, each part provided with a step flange, as shown at 7 and 8, the step flanges of which cooperate to hold the parts in working relationship. An adhesive of some form is interposed between each flange for joining the flanges together.

The hollow torso 1 is formed in two portions 9 and 10, both portions of which are provided with step flanges 11 and 12, which cooperate when the two halves of the torso are brought together, in the same manner as for the head construction. The torso is provided with flat surfaced portions

2

at 13, 14, 15, 16 and 17, and passed through each flat surfaced portion is a transverse bore as shown at 18, 19, 20, 21 and 22. In each case the flat surfaced portions are circular plane surfaces and the corresponding bore is coaxial and cylindrical so as to provide a wide diameter bearing of about half the diameter of the flat surfaced portion.

The neck 23 of the head has a flat surface portion 24 which cooperates with the flat surfaced portion 17, as best illustrated in Figure 1, and both arms have flat surfaced portions 25 which cooperate with the flat surfaced portions 15 and 16, while the legs have flat surfaced portions 26 for cooperation with the flat surfaced portions 13 and 14 of the torso.

The neck, arms and legs are provided with pairs of spaced studs 27 and 28, each stud having a curved outer surface, as shown at 29 and 30, and provided with an external tapered enlargement 31 and 32, providing shoulder portions at 33 and 34. The studs 27 and 28 therefore form a generally cylindrical split post in which the elongated tapered portions 31—32 are greater in axial length than the shank portion between the shoulder and the cylindrical surface 24 or 15 or 13, this shank portion forming the journal of the head, arm, or leg split post. As shown in the several figures the split studs or posts have a surface of revolution including a cylinder (the shank or journal) and a cone (the elongated tapered portion). The shoulder portions 33—34 form a latch which in radial section is at a right angle to the journal or shank while the angle between the cone 31—32 and the latch shoulder is acute. These latching surfaces or shoulders are semi-annular, and since the wide diameter journals fit the bearings quite snugly, the bearing joint is non-tilting. The spacing between the shoulder portions 33 and 34 and the plain surface 24 in the case of the head, or between the flat surfaces in the case of the arms and legs, is such as to accommodate the wall thickness of the torso therebetween.

The operation, uses and advantages of the invention just described are as follows:

When the two cooperating halves of the head and torso have been cemented together, studs may be passed through the transverse bores 18 to 22 inclusive. The studs, due to the spacing therebetween, will flex to permit the conical tapered portions 31 and 32 to pass through the opening and thereafter assume a normal position to lock the head, arms and legs to the torso in the manner illustrated in Figure 1. It is evident that the

3

shoulder portions 33 and 34 of the studs will prevent removal of the articulated members from the torso. Furthermore, the flat surface portions 24, 25 and 26 engage the flat surface portions 13 to 17 inclusive of the torso to provide bearing surfaces which in conjunction with the studs assure movement of the head, arms and legs without tipping. The portions 31 and 32 are catches for securing the studs to the torso. It is evident that the construction shown will permit rough usage of the doll without the likelihood of disengaging any of the movable members from the torso.

I claim:

1. In a doll construction, a wide-diameter, non-tilting bearing joint for a non-removable appendage pivotally mounted on the body portion of the doll, comprising: a hollow torso having parallel inner and outer circular plane surfaces with a coaxial circular opening therethru of roughly half the diameter of the outer surface, an appendage having a circular plane surface of the same diameter as the outer torso plane surface, two spaced members extending at right angles to the plane surface of the appendage, integral therewith, and together forming a generally cylindrical split post, said post having a shank journal snugly fitting the opening and of a length equal to the thickness of the hollow torso between the parallel surfaces, each of the members having a shoulder to form a latch portion to engage the inside surface of the torso, the split post being of a material relatively stiff but yielding so that the two members at their free ends may flex and approach each other to permit the latch portions to be forced thru the opening where they will then return to normal latching position inside the torso, thus forming a socket joint which will allow the head, arm, or leg appendage to turn freely in its wide diameter bearing in the torso, without danger of being pulled from its socket by ordinary rough handling.

2. The construction of claim 1 in which each of the two members of the split post includes an elongated tapered portion greater in axial length than the shank portion engaging the circular opening in the torso, extending to the arcuate latching edge in a slight increase in diameter from the free ends of the post, for easy insertion in the torso opening, the free end of the post having a diameter smaller than that of the torso opening.

4

3. The construction of claim 2 in which the appendage is an arm, the two members of the post have semi-annular shoulders to form latch surfaces to engage the inside surfaces of the torso, and the portions of the two members from their free ends to the latch surfaces is a surface of revolution including a cylinder and a cone, thereby to facilitate assembly of the arm with the torso, the cross-sectional angle between the shank and the latch shoulder being a right angle, the cross-sectional angle between the latch shoulder and the cone being an acute angle.

4. In a doll construction, a hollow torso and a hollow head, both of light weight uniform thickness material capable of slight flexing, the torso having a horizontal plane surface at its upper end with a central circular opening therethru of a diameter at least half that of the neck, said head having at its bottom a horizontal surface, and two spaced members integral with the head forming together a vertical split post generally cylindrical in form with a tapered portion having a shoulder forming a catch, the post having a shank portion between the head and the catch, and fitting snugly the central opening in the torso, the space between the bottom of the hollow head and the catch being equal to the thickness of the torso, whereby to provide a large diameter bearing for the rotatable head.

5. The construction of claim 4 in which the head is in two parts, one member extending from each of the two parts, the space between the two members being at least as great as the thickness of the hollow head and being bounded in part by opposed vertical plane surfaces of the two members.

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