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Howland et al.

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[54] DOLL CONSTRUCTION

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[52] U.S. Cl. 46/161
[51] Int. Cl. A63h 3/20
[58] Field of Search..... 46/151, 161, 162, 46/173

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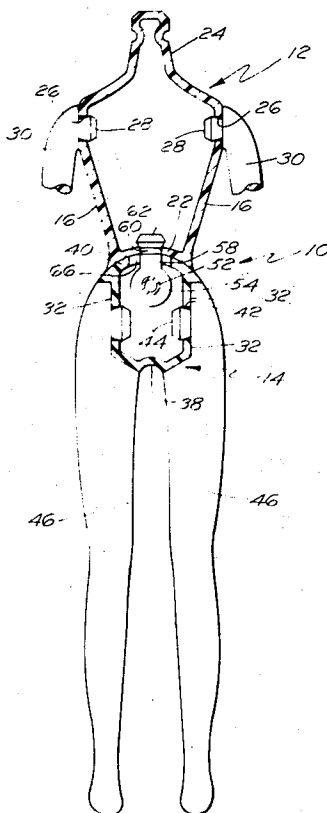
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[57]

ABSTRACT

A doll construction comprising hollow torso and trunk members and means releasably connecting said members, said connecting means being so constructed as to permit relative rotation of said members about an upright axis while at the same time permitting lateral tilting of said torso with respect to said trunk.

5 Claims, 5 Drawing Figures



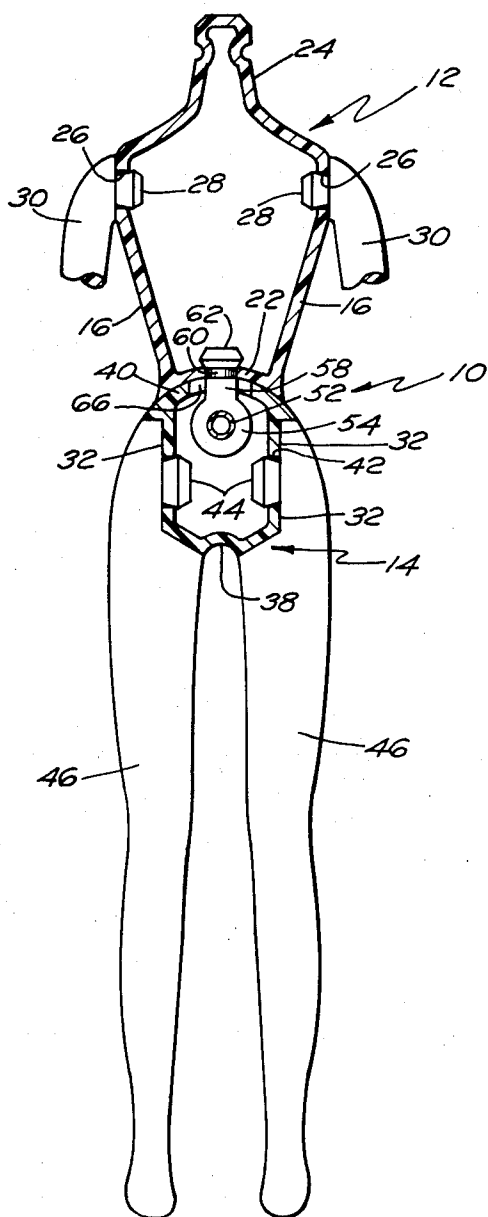


FIG. 1

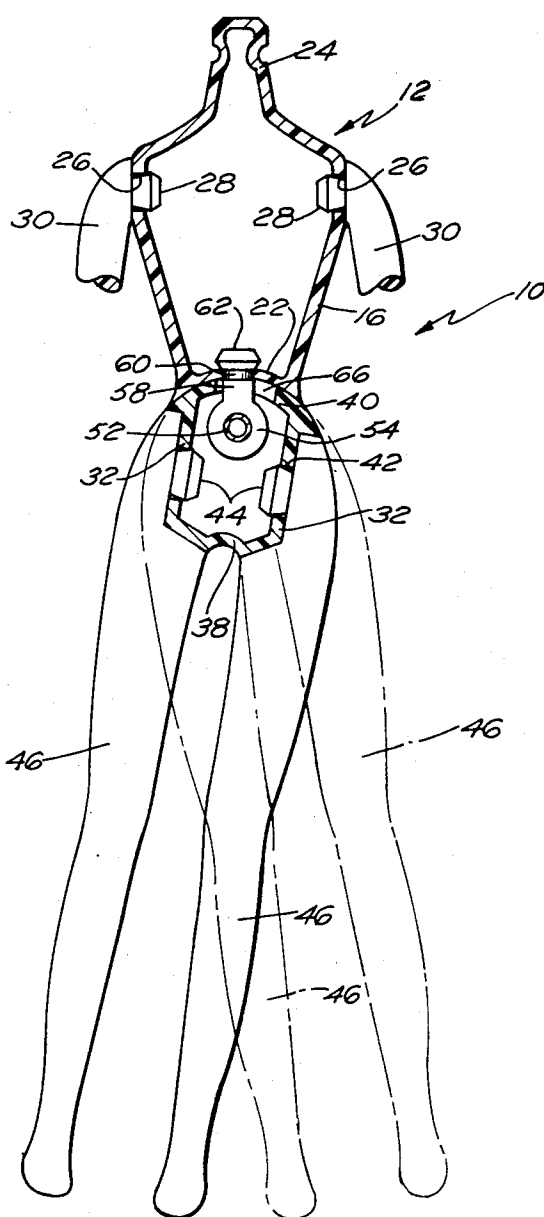


FIG. 2

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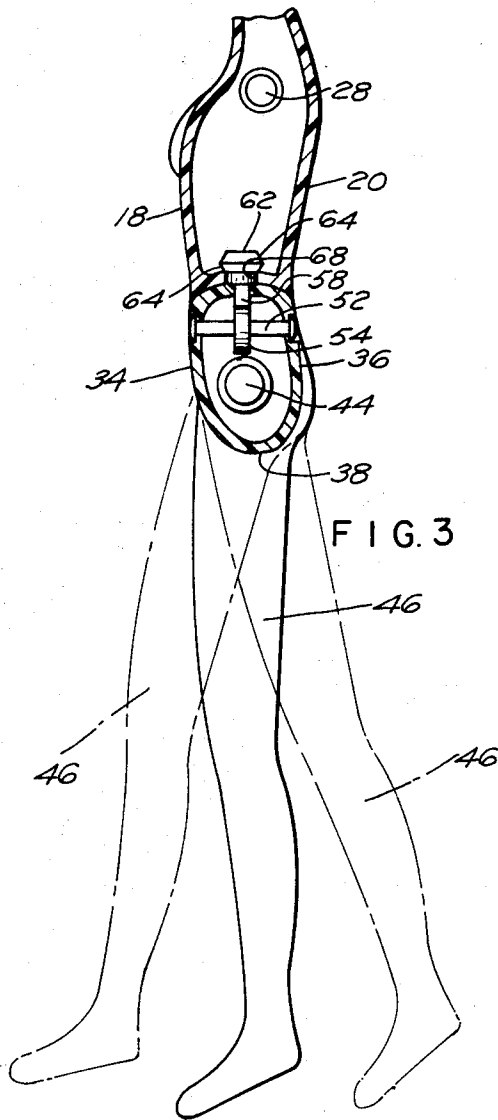


FIG. 3

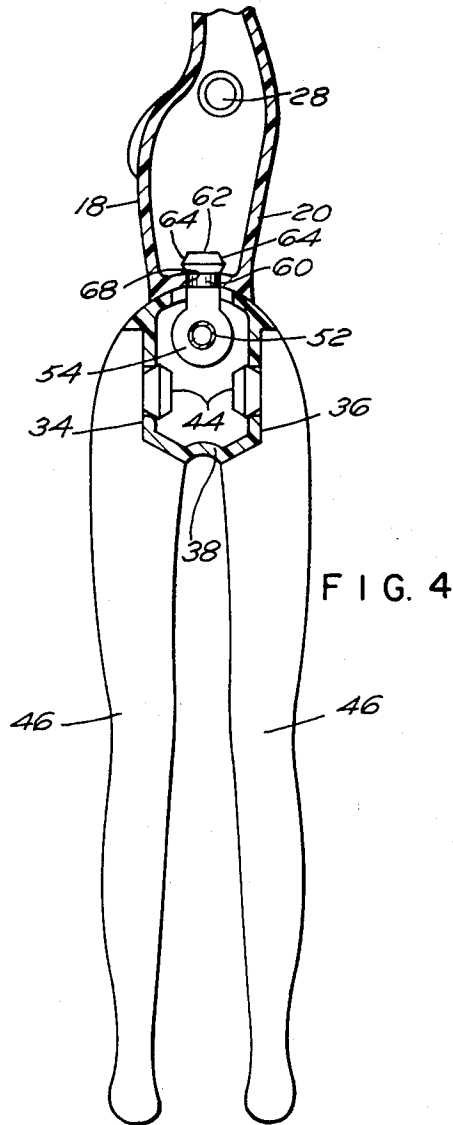


FIG. 4

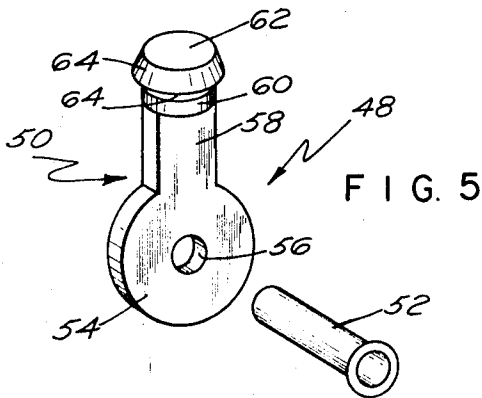


FIG. 5

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DOLL CONSTRUCTION

BACKGROUND AND SUMMARY OF THE INVENTION

The present invention relates generally to a doll construction, and is more particularly concerned with a novel and unique waist connection between the torso and trunk members that form a part of the doll construction.

Dolls having articulated joints, and particularly torso and trunk members swivelly interconnected to each other, are old and well known. However, the provision of a doll construction having a torso construction that may swivel to a trunk member, or, expressed differently, one that may rotate about an upright axis with respect to the trunk member, does not in itself provide a life-like action; because, obviously, to even generally simulate the articulation of the human body, it is necessary that the torso member be able to tilt or bend with respect to the trunk member. The problem is to provide such a construction for a relatively small doll, i.e., a doll in the nature of 9 inches in overall height, wherein an unsightly and unrealistic gap will not appear and be visible when the torso is bent or tilted with respect to the trunk and wherein the combination swivel or twist and bend or tilt action may be effectively accomplished without the necessity of using a plurality of complex mechanical parts.

It is therefore an object of our invention to provide a doll construction having a waist joint between torso and trunk members wherein said members may both twist and swivel, as well as bend or tilt, with respect to each other.

Another object is the provision of a doll of the character described wherein the torso and trunk members are readily attachable and detachable with respect to each other.

A further object is the provision of a doll of the character described wherein no unsightly gap is visible when the torso is tilted or bent with respect to the trunk.

Still another object is the provision of a doll of the character described that is relatively simple and inexpensive to manufacture and assemble, but which nevertheless is durable and relatively realistic in use.

In accomplishing the foregoing objectives, we have provided a doll construction comprising hollow torso and trunk members having complementary spherical surfaces in abutting and sliding relation with respect to each other. Connecting means are provided for releasably maintaining the torso and trunk members interconnected, said connecting means comprising an adaptor element that is pivotally mounted on a pin extending from front to rear of the trunk member, said adaptor having a shaft extending upwardly through a laterally extending slot in the top wall of the trunk member and then through an opening in the bottom wall of the torso member, said shaft having an enlarged head at its free end for maintaining the torso and trunk members so assembled. Thus, it will be seen that the torso member is rotatable about said shaft, and at the same time the torso member may be tilted or shifted laterally with respect to the trunk member, said tilting being accomplished by pivoting action of the adaptor about the aforesaid pin, within the limits defined by the aforesaid slot.

Other objects, features and advantages of the invention will become apparent as the description thereof proceeds when considered in connection with the accompanying illustrative drawings.

DESCRIPTION OF THE DRAWINGS

In the drawings which illustrate the best mode presently contemplated for carrying out the present invention:

FIG. 1 is a front elevational view, partly in section, and partly fragmented, showing our invention;

FIG. 2 is a view similar to FIG. 1 showing the torso and trunk members tilted with respect to each other;

FIG. 3 is a side elevational view, partly in section, of our invention;

FIG. 4 is a view similar to FIG. 3 showing the torso and trunk members twisted or rotated with respect to each other; and

FIG. 5 is an exploded perspective view of the adaptor assembly which forms a part of our invention.

DESCRIPTION OF THE INVENTION

Referring to the drawings, there is shown generally at 10 a doll construction comprising a hollow torso member 12 and a hollow trunk member 14, each of which is preferably blow molded of linear polyethylene, although other similar materials and other suitable manufacturing techniques could obviously be employed. The torso member 12 comprises side walls 16, front and rear walls 18 and 20, a generally concave bottom wall 22 and a neck portion 24 adapted to snap-receive a head member, not shown, in a well-known and conventional manner. Likewise in a conventional manner, the torso member 12 is provided with openings 26 which snap-receive mounting portions 28 of arm members 30, which may be injection molded of polyvinylchloride or similar material.

The trunk member 14 is provided with side walls 32, front and rear walls 34, 36, a bottom wall 38, and a convex top wall 40 complementary in configuration to the aforesaid concave bottom wall 22 of torso member 12. Side walls 32 are provided with openings 42 for snap receiving mounting portions 44 of leg members 46 in the same manner as the mounting of arm members 30, it being understood that both the arms and legs are rotatably mounted about the axis defined by their respective mounting members.

The means for connecting the torso and trunk members comprise an adaptor assembly shown generally at 48 in FIG. 5 and specifically comprising an adaptor element 50 and a pin or rivet 52. As will be seen most clearly in FIG. 3, pin 52 is secured to the trunk member in front-to-rear relation and pivotally receives circular portion 54 of adapter 52, said circular portion having an opening 56 therein through which pin 52 freely extends. Adaptor 50, which may be constructed of any suitable structural material, such as molded plastic, further comprises an upwardly extending shank 58 communicating with a circular neck portion 60 which in turn communicates with an enlarged head portion 62 having beveled surfaces 64. Shank portion 58 extends through an elongated slot 66 provided in top wall 40 and extending laterally thereof, and then circular neck portion 60 is rotatably received within a circular opening 68 provided in bottom wall 22 of torso member 12. Due to the inherent resiliency of the plastic materials employed, the enlarged head 62 may be snapped or

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popped through opening 68 to assemble the torso and trunk members to each other, it being further apparent that these members may be readily attached and detached, the beveled surfaces 64 functioning to facilitate this action.

It is important to note that the adaptor element 50 is dimensioned so that enlarged head portion 62 snugly and frictionally maintains the torso and trunk members in engagement with each other, it being apparent that when so assembled, the complementary spherical surfaces 22 and 40 are in abutting and sliding engagement. When so assembled, the torso member 12 may be twisted or rotated with respect to trunk member 14 by twisting or rotating the former about the axis of shank 58, it being specifically noted that during this action the edge of opening 68 will act as a bearing support for the rotating circular neck portion 60. At the same time, the torso member 12 may be tilted or bent with respect to trunk portion 14 by simply manipulating the former from left to right, or vice versa, as illustrated in FIGS. 1 and 2. During this action, adaptor 50 will pivot about pin 52 within the limits defined by slot 66. Thus, not only can the torso member be twisted or turned with respect to the trunk member, but it also can be tilted or bent with respect thereto; and due to the frictional grip exerted by adaptor 50, the torso and trunk members have sufficient frictional drag so as to maintain themselves in any position of adjustment. During the aforesaid twisting and/or tilting movement, the complementary spherical surfaces of torso 12 and trunk 14 always remain in close engagement with each other whereby no unsightly gaps or openings are visible, and hence even though a relatively simple and inexpensive structural arrangement has been provided, a relatively realistic and life-like appearance and action result.

While there is shown and described herein certain specific structure embodying the invention, it will be manifest to those skilled in the art that various modifications and rearrangements of the parts may be made without departing from the spirit and scope of the underlying inventive concept and that the same is not lim-

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ited to the particular forms herein shown and described except insofar as indicated by the scope of the appended claims.

What is claimed is:

1. A doll construction comprising a hollow torso member and a hollow trunk member, means connecting said torso member to said trunk member so that said members may rotate with respect to each other about an upright axis, and also tilt with respect to each other from side to side, said connecting means comprising a substantially rigid adaptor element rotatably connected to said trunk member about a front-to-rear axis, a slot extending through the top surface of said trunk member and extending laterally thereof, a shank portion on said adaptor extending upwardly through said slot and rotatably receiving said torso member while at the same time normally maintaining said torso member against separation from said trunk member, whereby said torso member may rotate around the axis of said shank and at the same time may tilt laterally with respect to the trunk member by pivoting action of said adaptor about said front-to-rear axis within the limits defined by said slot.

2. In the doll construction of claim 1, the bottom surface of said torso member having an opening therein, said shank extending through said opening and having an enlarged head at its end maintaining said torso member and trunk member in assembled relation.

3. In the doll construction of claim 2, said enlarged head being snap-received within said opening whereby said torso member may be readily attached to and detached from said trunk member.

4. In the doll construction of claim 1, said torso member being readily attachable to and detachable from said trunk member.

5. In the doll construction of claim 1, said torso member having a generally concave bottom surface, and said trunk member having a generally complementary convex top surface, said connecting means holding said surfaces in abutting relation.

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