

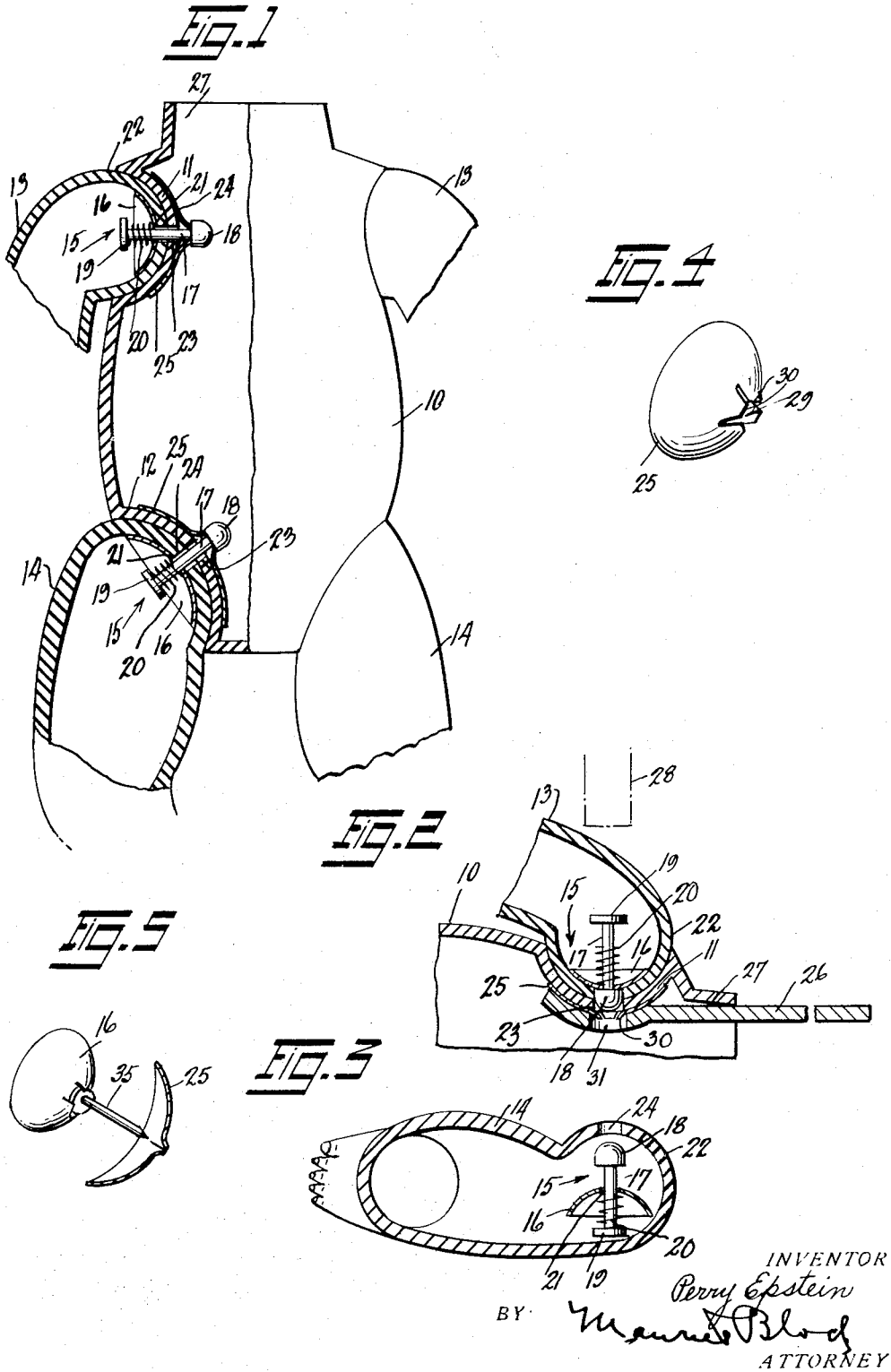
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LIMB JOINT FOR DOLLS AND THE LIKE

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LIMB JOINT FOR DOLLS AND THE LIKE

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3 Claims. (Cl. 46—40)

This invention relates to limb joints for dolls and the like, and more particularly to the joints of such toys made of rubber or other flexible material.

One of the objects of the invention is to produce a movable limb joint for dolls and the like in which the parts will be snugly held together and still provide sufficient flexibility for the free movement of the limbs with respect to the doll body.

Another object of the invention is to provide such a joint in which the parts comprising same cannot accidentally become disjointed.

A further object of the invention is to provide a simple yet efficient method for joining the limbs of a doll or the like to the body thereof.

Another object is to produce a device of the character described in which the maximum simplicity of construction and operation is secured.

Other objects and advantages will appear as the nature of the improvements is better understood, the invention consisting substantially in the novel arrangement and co-relation of parts herein fully described, and illustrated in the accompanying drawing, wherein similar reference characters are used to describe corresponding parts throughout the several views, and then finally pointed out and specifically defined and indicated in the appended claims.

The disclosure made the basis of exemplifying the present inventive concept suggests a practical embodiment thereof, but the invention is not to be restricted to the exact details of this disclosure, and the latter, therefore, is to be understood from an illustrative, rather than a restrictive standpoint.

The inventive idea involved is capable of receiving a variety of mechanical expressions, one of which, for the purpose of illustration, is shown in the accompanying drawing, in which

Figure 1 is a fragmental view in front elevation partly in section of a doll employing one form of my improved limb joint.

Figure 2 is a fragmental sectional view of a doll showing the limb in the act of being secured to the body.

Figure 3 is a sectional view of a leg showing a portion of the joint fastening means therein.

Figure 4 is a perspective view of the joint stud retaining cup and

Figure 5 is a perspective view of a modified form of my invention.

Referring now to the drawing in detail 10 indicates a hollow doll body preferably made of

rubber or other resilient material and provided at its arm and leg joints with inwardly extending concavo-convex sockets 11 and 12 respectively. The arms 13 and legs 14 of the doll are likewise hollow and preferably made of rubber, blown or molded. The arms and legs are each formed around a securing device 15 which, after the said limbs are formed lies loosely within the hollows of the said limbs (Fig. 3). The securing device comprises a cupped washer 16, a stud 17 provided at one end thereof with a head 18 and at the opposite end thereof with a head 19. One of the said heads may be integral with the stud 17, while the other head is made of a separate part and secured to the stud after a coiled spring 20 is placed thereon and the stud passed through an opening 21 in the washer 16.

Before joining the limbs to the doll body, which are provided with projections 22 corresponding in shape to the sockets 11 and 12, the said limbs are perforated at 24 and the head 18 of the stud 17 is pushed therethrough so that it may be inserted into an opening 23 in either the arm or leg sockets 11 or 12. I then place a cupped washer 25 (Fig. 2) upon a tool 26 and insert same through the neck 27 of the doll and then bring same against one or the other of said sockets. A tool or plunger 28 is then forced against the head 19 from the outside of the limb thus pushing the head 18 through an opening 29 formed by partially splitting the washer 25 to form resilient lips or clips 30, until the said head snaps past the said lips which prevent the stud from coming out of place. A hole or opening 31 in the tool 26 forms centering means for the cupped washer 25 and permits the stud to be pressed into place. The spring 20 maintains the joint under proper tension. If desired, the spring may be omitted and the stud 17 may be secured to the cupped washer 16.

In Figure 5 I have shown a modified form of the stud and washer arrangement, wherein I secure a pointed pin 35 directly to the washer 16 and depend upon the frictional engagement of same with the split washer to maintain the limbs in their respective sockets.

From the foregoing, it will be seen that I have provided a simple yet efficient means for joining the doll limbs to the body portion thereof.

While I have described my invention as applied to rubber dolls, I desire it understood that the invention is just as applicable to other toys such as stuffed animals and the like made of other materials besides rubber.

I also desire it understood that wherever in

the claims I use the word doll, other toys are to be included.

I also desire it understood that my improved joints may be utilized for connecting the heads of dolls and other toys to the bodies thereof, and the appended claims are not intended to be limited to the application of my improved joint to limbs only.

Having described my invention what I claim as new and desire to secure by Letters Patent is:

1. A limb joint for a hollow doll, comprising a substantially concavo-convex perforated socket in the doll body, a correspondingly shaped perforated projection on the doll limb extending into the said socket, a perforated cupped washer on the convex surface of the socket, a perforated cupped washer on the concave surface of the projection, one of the said washers being partially split to form projections at its perforation and a stud passing through the projection and socket and maintained in place by the said washer projections.

2. A limb joint for a hollow doll, comprising a substantially concavo-convex perforated socket in the doll body, a correspondingly shaped per-

forated projection on the doll limb extending into the said socket, a perforated cupped washer on the convex surface of the socket, a perforated cupped washer on the concave surface of the projection, one of the said washers being partially split to form projections at its perforation, a stud having a head at each end thereof and passing through the said limb projection, socket, and washers, one of the said heads being in engagement with the washer projections, and a spring exerting a tension between the other of said head and washer.

3. A limb joint for a hollow flexible doll, comprising a perforated joint area on the doll body, a perforated joint area on the doll limb in contact with the joint area of the doll body, a stud passing through the said perforated areas, a washer near each end of the stud, a head on the stud, resilient lips on one of the washers in engagement with the said head to maintain the said stud in place and prevent accidental displacement of the parts, and joint tensioning means on the said stud in engagement with the other of said washers.

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