

"IMPROVEMENTS RELATING TO MODEL FIGURES,
PARTICULARLY DOLLS"

This invention relates to model figures, particularly dolls, and is directed towards an improved construction of the limbs or torso of such figures to enable life-like movement of the body to take place.

5 According to the invention, there is provided a model figure in which the body of the figure comprises an insert of rigid sheet material around which the exterior shape of the body is formed in flexible plastics material, said insert being bent out of its
10 normal plane at some portions to form relatively rigid channel sections in such a way that points of relative weakness are formed at the planar sections of said sheet material, said points of relative weakness allowing bending of the body to take place at those points
15 when pressure is applied. Preferably the plastics material is moulded around the insert.

This invention may be applied to the limbs - arms and legs of model figures of both human and animal form, and may also, in certain circumstances be used to
20 manufacture the torso - body, head and neck portion - of such a figure. In an embodiment of the invention pairs of limbs are formed about a single insert to enable that part of the insert joining the two limbs to be relatively weakened to act as a joint between the
25 limbs.

An embodiment of the invention will now be described by way of example only and with reference to the accompanying drawings in which:-

Figures 1 and 2 show front and edge views respectively of an embodiment of an insert for use in the present invention;

Figures 2 and 3 are sectional views along the lines
5 V-V and VI-VI respectively of Figure 1;

Figures 5 and 6 are front and side views respectively of a pair of legs for a doll made using the insert of Figures 1 to 4; and

Figures 7 to 10 show various positions which may be
10 taken up by the legs shown in Figures 5 and 6.

Referring to Figures 1 and 2, the insert comprises a sheet of metal which is stamped out to the shape shown in Figure 1. The particular insert shown is intended for use in fabricating the legs and feet of a doll and comprises two elongate portions 1, 2 corresponding to the
15 legs of the doll which are joined at their upper ends by a relatively narrow link portion 3. The strength of the leg portions 1, 2 is varied along their length by bending certain parts of the leg portions (those that are to
20 remain rigid) to form a channel section, shown in detail in Figures 3 and 4 under reference 11. The line 6-6 corresponds to the knee joint since this part remains planar and thus relatively weak. If an attempt is made to bend the insert out of the plane of the paper, the
25 tendency will be for the bending to take place at this line 6-6 which may thus constitute the knee joint of the doll.

For convenience in manufacturing, the bottom ends of the leg portions 1, 2 are likewise joined, by a link
30 7, but this latter link may be removed after manufacture

to enable the feet to be moved apart. To this end, the link 7 is joined to the portion 1, 2 by narrow portions 8 which may easily be broken.

In order to form the feet of the doll, a narrow
5 lug 9 is formed at the bottom of each of the leg portions adjacent the outside edges of the link 7, these links being bent to the position shown in Figures 2 to enable the feet to be formed.

During manufacture of a pair of doll's legs the
10 insert is located in a mould (not shown) by means of the links 3 and 7 and a suitable soft plastics material introduced into the mould. During moulding, plastics material enters the apertures 10 in the metal sheet to thereby ensure that the insert is securely held within
15 the plastics moulding.

Figures 5 and 6 are views corresponding to Figures 1 and 2 respectively showing the outline of the finished pair of legs. Although in practice both legs will be moulded simultaneously, they are in fact separate, the
20 left leg being shown under reference 12 and the right leg under reference 13. The legs are joined by links 3 and 7, the latter of which, as has already been mentioned, is removed after manufacture. The link 3, however remains as the only link between the legs, and enables a
25 variety of realistic leg positions to be taken up, as will become clear.

Figures 7 to 10 illustrate a variety of basic positions which the legs and feet of Figures 1 and 2 may take up. Twisting of the link 3 enables the legs
30 to be bent into a walking position (Figure 7). Also both the left and right legs can move forwards and back-

wards to simulate the action of walking. The legs can also be moved apart as shown in Figure 9. Figure 8 shows the movement of the feet by bending the lug 9 backwards and forwards. Figure 10 shows bending of the knee about the line of weakness 6-6. It will be appreciated that combinations of these various movements and positions will enable the doll to take up a wide variety of realistic positions which can be changed at will many times over.

CLAIMS

1. A model figure in which the body of the figure comprises an insert of rigid sheet material around which the exterior shape of the body is formed in flexible plastics material, said insert being bent out
5 of its normal plane at some portions to form relatively rigid channel sections in such a way that points of relative weakness are formed at the planar sections of said sheet material, said points of relative weakness allowing bending of the body to take place at those
10 points when pressure is applied.
2. A model figure as claimed in claim 1 wherein the plastics material is moulded around the insert.
3. A model figure as claimed in either of claims 1 or 2 wherein each set of limbs, legs or arms, is formed
15 by a single one of said inserts, and wherein the joint between the head of the limbs is formed as a point of relative weakness to allow movement as between the two limbs.
4. A model figure as claimed in claim 3 wherein
20 the limbs are the legs of a model figure, and wherein the insert is initially joined in the area of the feet by a bridge of said sheet material which is joined to the remainder of the sheet material by a weakened portion so that, after embedding in the plastics
25 material, the bridge can be broken away and removed.
5. A model figure substantially as hereinbefore described with reference to the accompanying drawings.

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