March 14, 1933. L. M. DUNN ET AL 1,901,707

TOY

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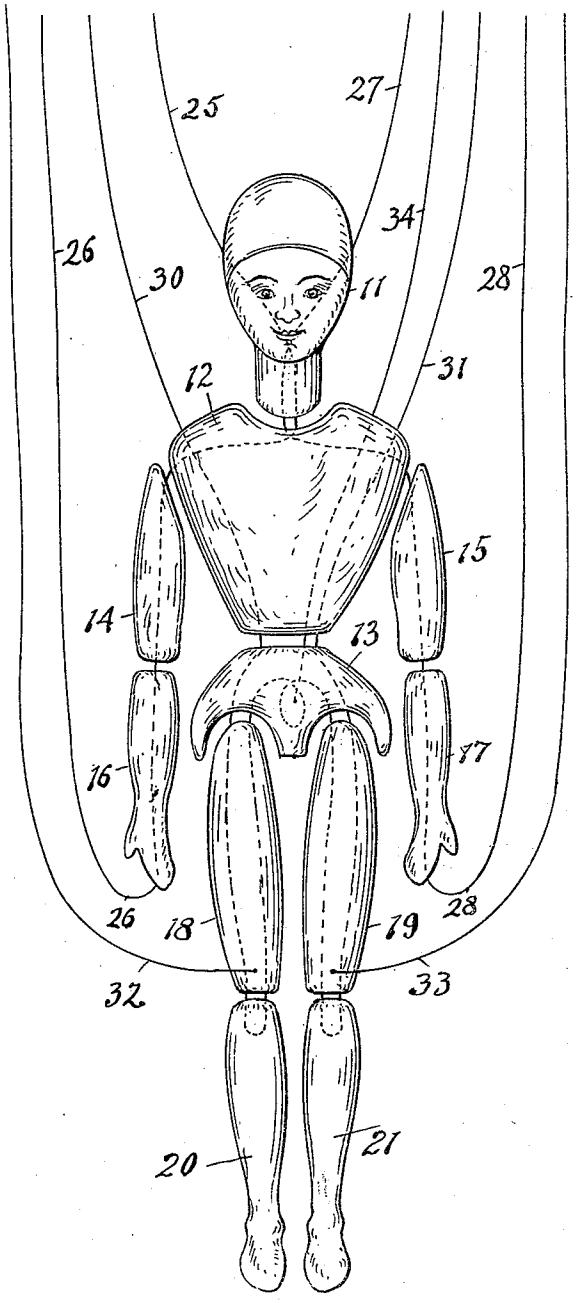

Fig. 1.

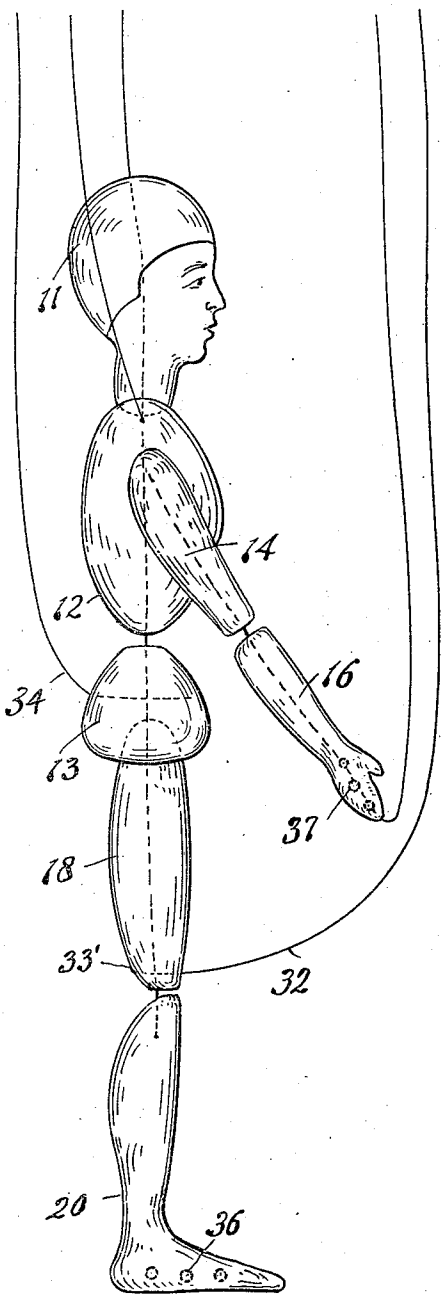

Fig. 2.

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UNITED STATES PATENT OFFICE

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TOY

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This invention relates to a toy and, more particularly, to a marionette or animal adapted to be employed in a puppet show.

Puppets or marionettes have long been employed in theatrical performances. The figures usually employed are small images of the human figure which have been suitably dressed or "made up" and which have the various portions of the body flexibly connected together. Control strings are attached to each of the sections and are secured to the operator's fingers or to a controller to provide means by which the puppet may be manipulated as desired.

It is one object of the present invention to provide a toy of the type referred to with members made of a light, durable material adapted to be molded in an inexpensive manner and which are secured together so that they will not separate.

Another object of the present invention is to provide a toy of the type referred to having its parts so connected as to be capable of movement in a natural manner.

Other objects of the invention and features of novelty will be apparent from the following description taken in connection with the accompanying drawing, in which:

Figure 1 is a front view of a marionette constructed in accordance with our invention; and

Fig. 2 is a side view of the marionette shown in Fig. 1 with certain parts in a different relative position.

For the purpose of illustrating the principles of our invention, we have shown the application thereof to a marionette in the general form of the human figure but it will be understood that the invention is also adapted to toys simulating animals and other objects.

The body of the marionette shown in Fig. 1 is composed of eleven separate elements, which comprise a head portion 11, an upper trunk or breast portion 12, a lower trunk or pelvic portion 13, arms composed of upper arm portions 14 and 15, and lower arm portions 16 and 17, the legs composed of thigh portions 18 and 19 and lower leg portions 20 and 21. We prefer to construct these portions from sponge rubber or other plastic material which may be readily molded, and which has sufficient strength and a durable surface adapted to be colored or painted to suit different requirements.

The body portions are preferably held together by strings or similar flexible members, it being understood that, wherever the specification refers to strings, it includes all similar constructions. In order that the strings will not pull out, they are embedded in the composition of which the body portions are constructed, while the ends of the strings extend outside of the body and provide the controls.

As illustrated, a string 25 enters the right-hand side of the head. This string extends through the head and neck portion, thence through the breast portion and then through the right arm. The end 26, which is preferably an extension of the string 25, extends from the right hand and controls the movement of the right arm. A string 27 projecting from the left-hand side of the head extends through the head and neck member, thence through the breast and left arm portions, and terminates in the end 28 which extends from the left hand. The end 28 furnishes means to control the movement of the left arm. The strings 25 and 27 provide means to control the movement of the head portion of the marionette and also form the flexible connections between the members through which they extend.

A string having an end portion 30 projecting from the right shoulder extends through the breast portion 12, thence through the lower trunk or pelvic portion 13, and into the right leg. This same string extends through the thigh portion 18 of the right leg and into the lower leg portion 20, whence it is doubled back and extends through the thigh again and into the pelvic portion 13 where a loop is made in the string in order to anchor it securely in the pelvic portion. This string then extends into the thigh portion 19 of the left leg and lower leg portion 21, then back through the pelvic portion, through the breast portion, and terminates in the extension 31 which

projects from the left shoulder. The end portions 30 and 31 provide means to control the shoulder portions of the body while the middle portion of the string serves to connect the leg and trunk sections together.

In order to provide means by which the movement of the legs can be controlled, strings 32 and 33 are fastened to the thighs. The ends of these strings may be embedded in the knee portions, while knots or enlargements 33′ may be provided in the strings to insure that they will not pull out. If desired, these strings may be attached after the molding process is completed. A string 34 is similarly attached to the rear of the pelvic portion and serves to control this portion of the body. Small weights 36 and 37, such as lead shot, are embedded in the feet and hand portions. This additional weight aids in controlling these members.

The marionette provided by our invention can be produced at a very low cost. It is preferably formed in a mold of proper design having upper and lower portions. The dividing line between the parts of the mold will be substantially at the mid-point between the front and rear of the body. Pieces of plastic material are placed in the mold and the strings are laid between these pieces so as to conform to the arrangement described. The plastic material is then vulcanized in the usual manner to complete the molding operation. The exposed portions of the body, such as the face and the hands, may be painted or otherwise decorated, as desired, so that the marionette will have a lifelike appearance.

It will be seen that the marionette provided by our invention is easy to construct and has its members securely held together. Not only are the members securely held together, but they are secured in such a manner that the members can be easily moved when desired, while, at the same time, they are held in their proper relation. It will be seen that two strings are provided at each of the knee joints and that these strings are spaced relatively far apart. This permits the knee to bend in a backward direction but prevents sidewise movement at this point.

It will also be observed that the ends of the leg portions at the knee joint are substantially parallel in the front but are tapered at the back. This permits the knee to bend backwards freely, but prevents the knee bending forward, which is the natural condition at this joint.

It will be seen that the thigh portions extend into recesses in the pelvic portion and that there are two strings at each of these joints. The trunk members are joined together by two strings which are widely separated so that these members will not twist relative to each other. The strings which connect the head to the upper trunk portion, on the other hand, are placed relatively close together so that the head may be turned or inclined as desired. The arms are held together by but a single string. This allows a very free movement of the arms in all directions, which is natural for these members.

While this invention has been described and illustrated as employing continuous strings, the ends of which serve as control strings and which extend through the various members to connect them together, it should be understood that the invention is not limited to this construction, nor is it limited to the precise arrangement of these strings which is shown. It is contemplated that the control strings may be separate from the other strings. In this case, the control strings would have their ends embedded in the body members and would have knots or other enlargements to keep them from pulling out. The body members could be secured together by short pieces of string having their ends embedded in the members to be jointed. Knots would be provided in these strings to keep them from pulling out.

From the above, it will be seen that our invention provides a marionette in which the body members are universally articulated and readily movable at will, and which has its members normally held in their normal or natural relation. As the marionette can be produced in one operation in a mold, it is clear that it can be constructed at a very low cost.

Having thus described our invention, we claim:

A toy having the shape of the human body, said toy consisting of a plurality of molded sections and including a head section, an upper trunk section, a lower trunk section, arms composed of upper and lower sections, and legs composed of thigh and lower leg sections, said sections being spaced apart and freely movable in all directions relative to each other, strings embedded in said sections and extending across the spaces between the sections to flexibly secure the sections together, a plurality of strings spaced apart laterally being provided for the joints between the trunk sections, between the thigh and lower trunk sections, and at the knee joints, and providing for universal articulation between the sections so connected but normally holding said sections in their normal relation.

In testimony whereof, we hereunto affix our signatures.

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