Sept. 23, 1969 W. H. HUNT 3,468,055

FOLDING PUPPET, MARIONETTE, OR DOLL, HEAD

Filed April 27, 1966 5 Sheets-Sheet 1

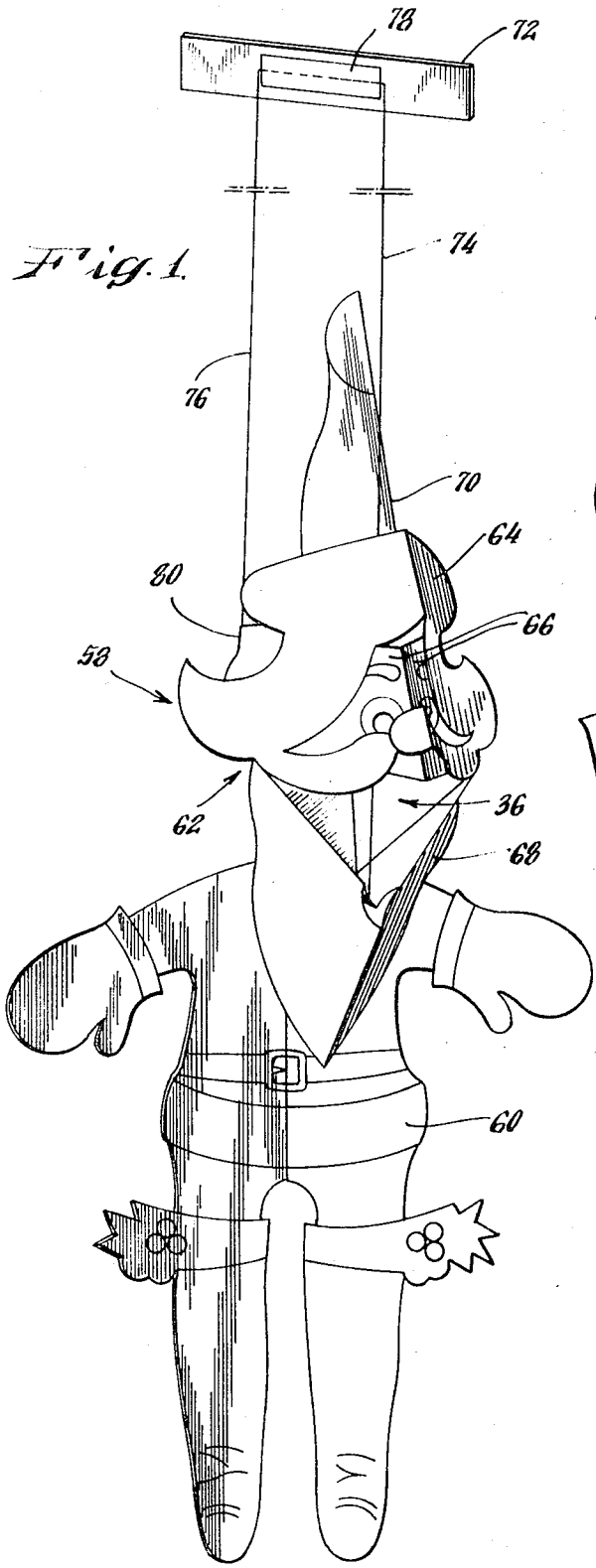

Fig. 1.

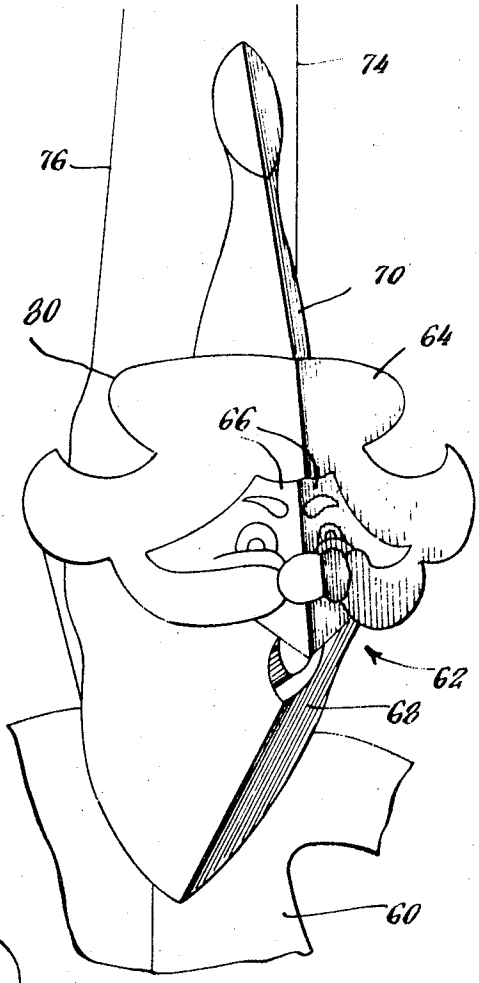

Fig. 2.

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Fig. 3.

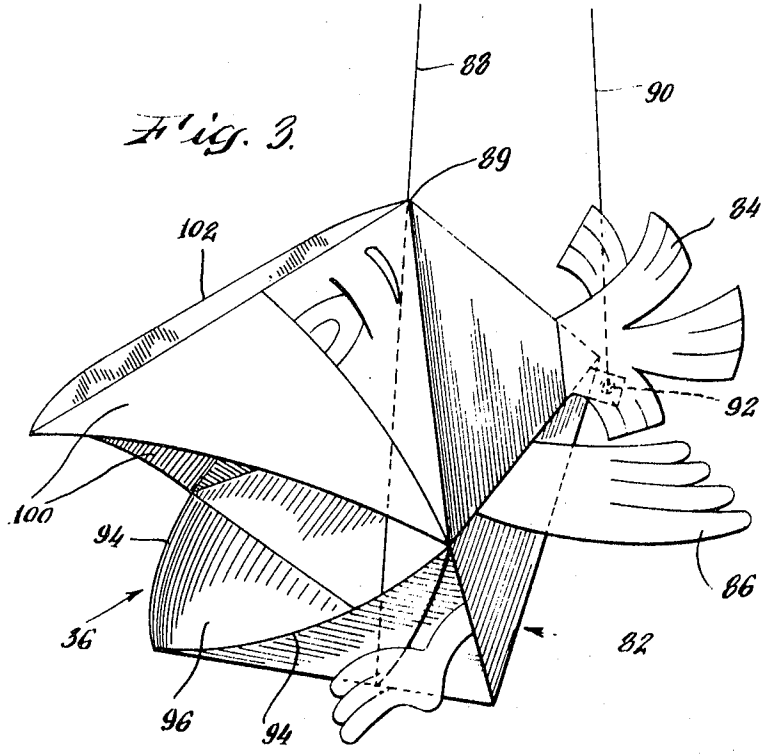
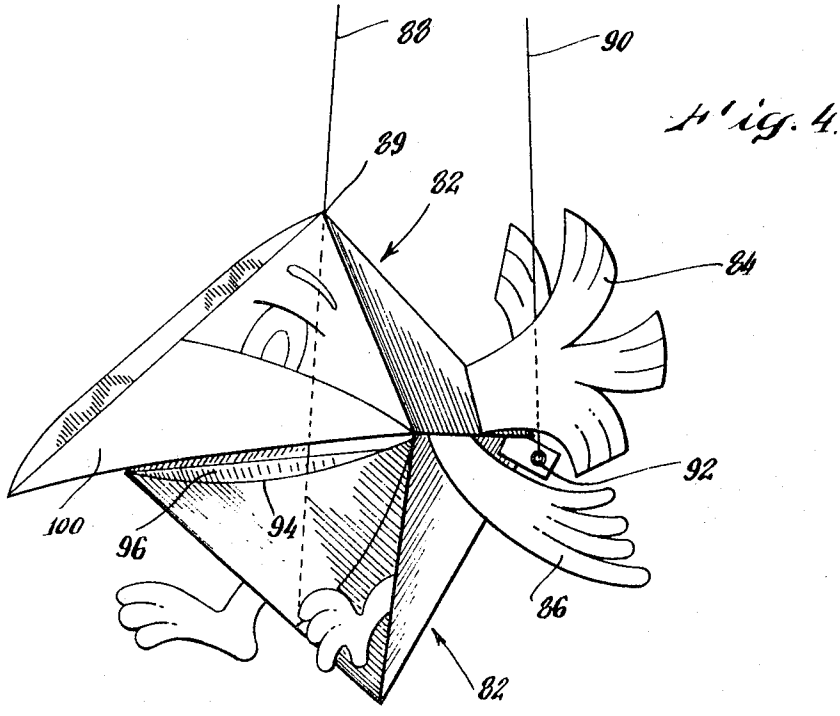


Fig. 4.



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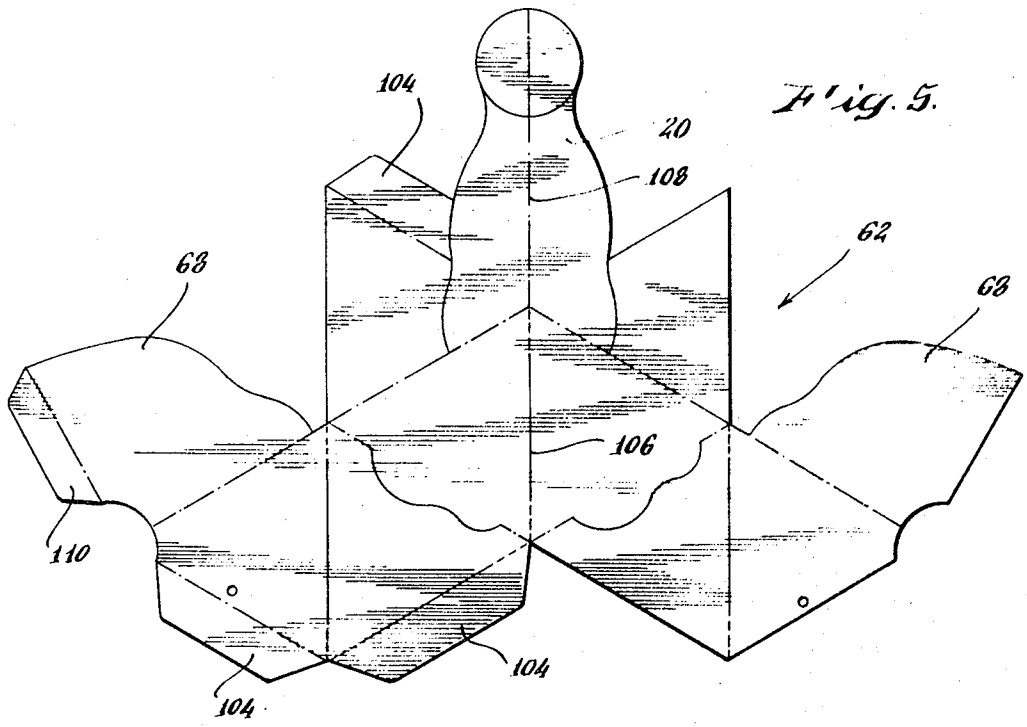

Fig. 5.

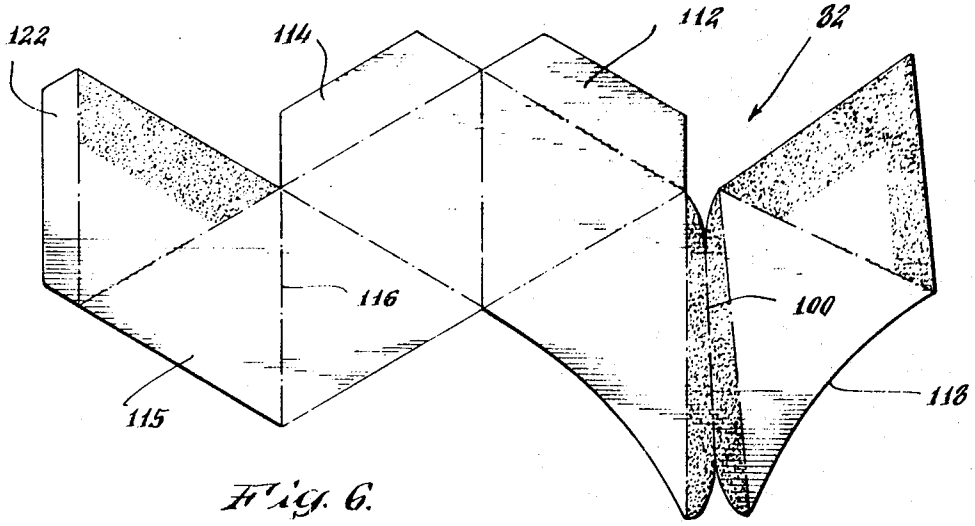

Fig. 6.

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Fig. 9.

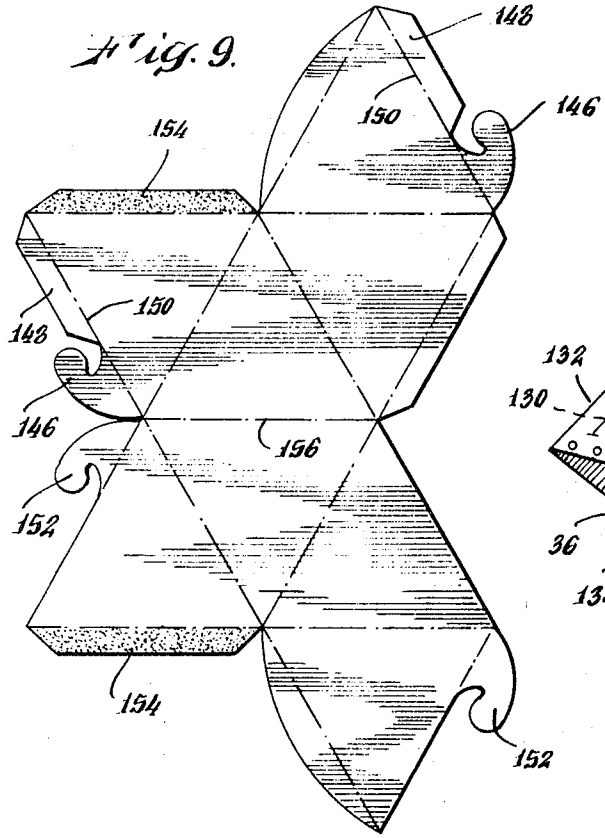
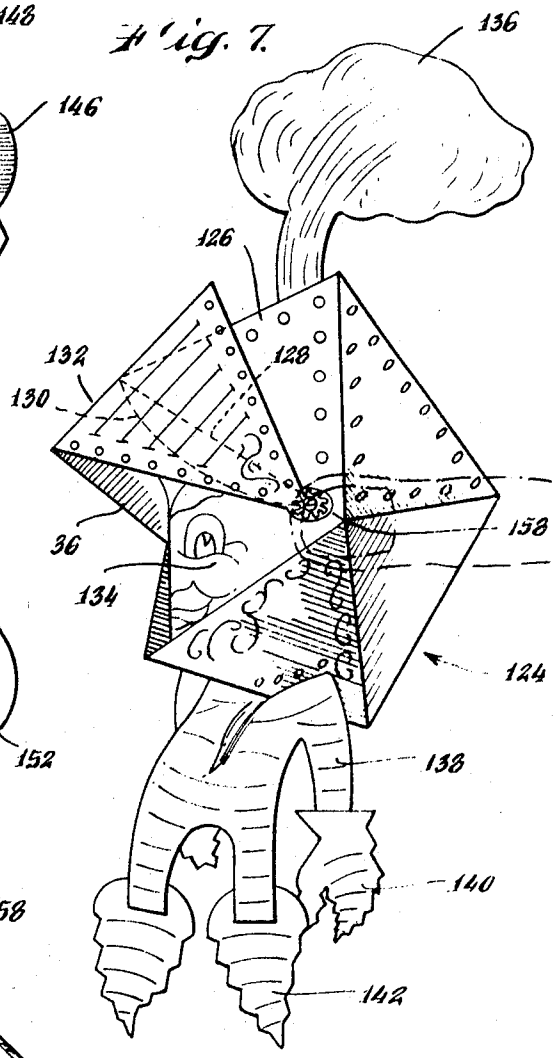


Fig. 7.



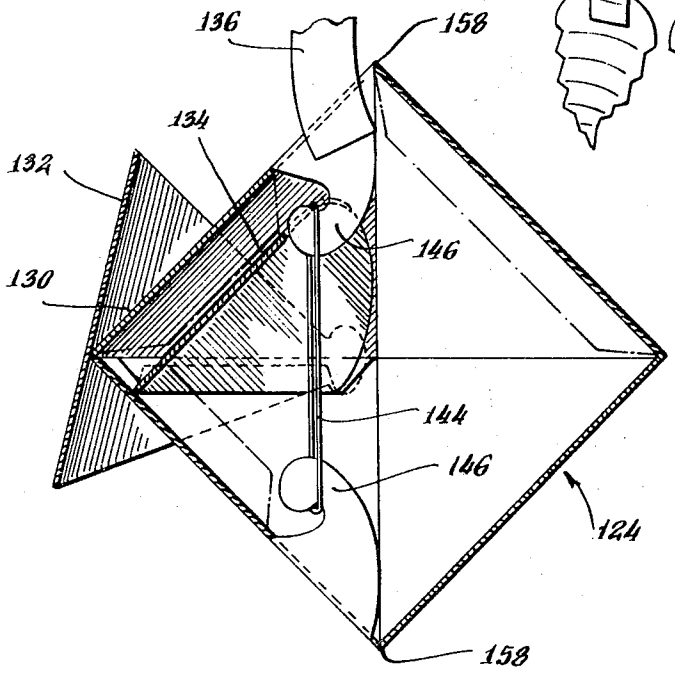


Fig. 8.

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Fig. 10.

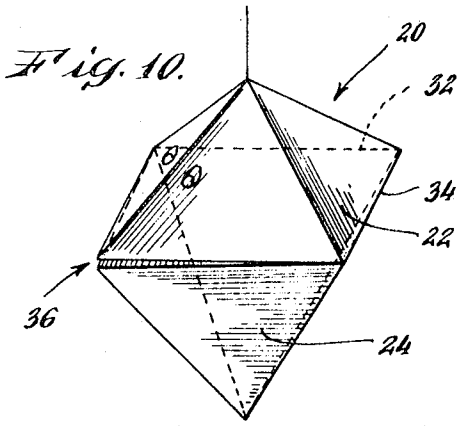


Fig. 11.

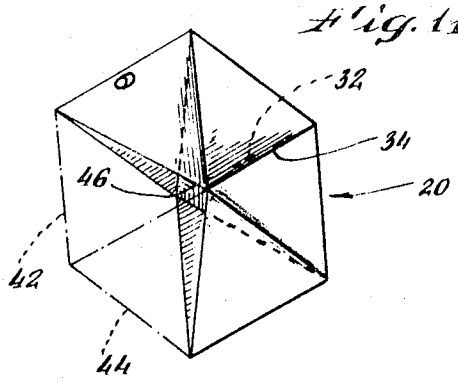


Fig. 12.

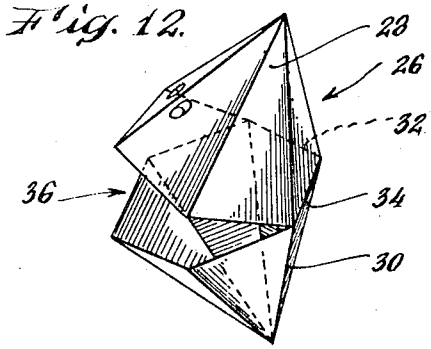


Fig. 13.

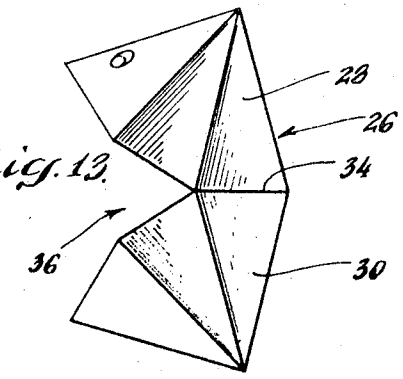


Fig. 14.

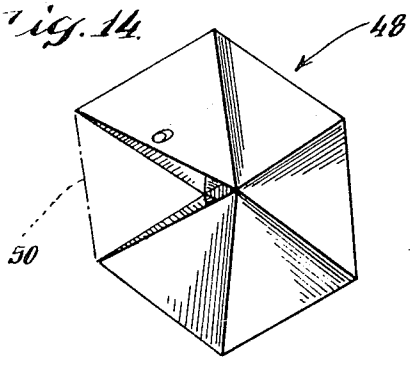
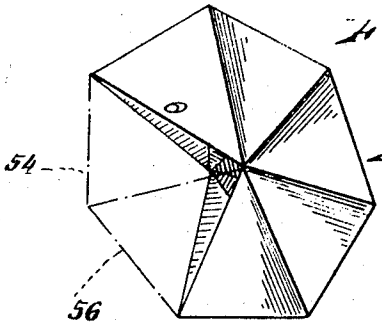


Fig. 15.



United States Patent Office 3,468,055 Patented Sept. 23, 1969

3,468,055

FOLDING PUPPET, MARIONETTE, OR DOLL, HEAD

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Claims priority, application Japan, Oct. 15, 1965, 40/28,408; Oct. 28, 1965, 40/87,117
Int. Cl. A63h 3/36, 9/00
U.S. Cl. 46—126 5 Claims

ABSTRACT OF THE DISCLOSURE

A folding puppet, marionette, or doll, head. More particularly, it relates to a puppet, marionette, or doll, head formed of paper, cardboard, plastic sheet, or the like, that may be folded flat for shipping and storage and may be erected quickly and easily for use in an animated display. The folding puppet has a body portion characterizing a human figure.

This invention relates to a folding puppet, marionette, or doll, head. More particularly, it relates to a puppet, marionette, or doll, head formed of paper, cardboard, plastic sheet, or the like, that may be folded flat for shipping and storage and may be erected quickly and easily for use in animated displays, in puppetry, or the like.

The demand for point of sale displays, store window displays, and the like supports a large industry in the United States. It has often been demonstrated that such displays are of much greater effectiveness if animated. However, the lives of such displays are usually quite short, depending on short-term advertising campaigns, or on temporary store window displays. Hithertofore, animated displays have required complex machinery for animating expensive three-dimensional sculptural shapes. Because of the expense of producing such displays, they have not enjoyed wide use. Short-term animated displays have usually employed flat figures, doing very little more than moving around to initially catch the eye.

It is highly desirable that displays for short-term point of sale, store window use, and the like be conveniently shipped in small bulk and easily erected by unskilled persons. In the past, three-dimensional folding paper forms have been used for such displays but these have been largely static displays or, if employing animation, the animation included only simple, whole body motions, waving of arms, legs, or tails, up and down head motions, or the like.

I have observed, however, that much more effective animation can be achieved through mouth motion of a head than through these body motions. For example, most ventriloquists achieve a very high degree of realism with mere simple up and down mouth motions of their puppet.

It is, therefore, a primary object of this invention to provide puppet, marionette, or doll, heads formed of paper, cardboard, or the like for animated displays.

Another object of the invention is to provide such puppet, marionette or doll, heads that fold flat for shipping and storage.

Still another object of the invention is to provide such puppet, marionette, or doll, heads having a mouth opening.

A further object of the invention is to provide such puppet, marionette, or doll, heads providing simple means for animating the mouth opening.

Yet another object of the invention is to provide such puppet, marionette, or doll, heads that may be suspended by means of strings.

Still another object of the invention is to provide such puppet, marionette, or doll, heads which may be animated by the exertion of external pressure.

A further object of the invention is to provide such puppet, marionette, or doll, heads that are self-erectable.

A still further object of the invention is to provide such puppet, marionette, or doll, heads to which body members, head gear, and the like may be conveniently attached.

Yet another object of the invention is to provide such puppet, marionette, or doll, heads that may be formed from a single flat blank.

Still another object of the invention is to provide such puppet, marionette, or doll, heads that may be formed and assembled by automatic machinery.

A further object of the invention is to provide such puppet, marionette, or doll, heads of widely-varying shapes, configurations, and appearances to simulate widely-varying personalities of human beings, animals, imaginary characters, and the like.

Other objects of the invention will in part be obvious and will in part appear hereinafter.

The invention accordingly comprises articles of manufacture possessing features, properties, combinations of elements and arrangements of parts as exemplified in the articles hereinafter described. The scope of the invention is indicated in the claims.

For a fuller understanding of the nature and objects of the invention, reference should be made to the following detailed description, taken in connection with the accompanying drawings, in which:

FIGURE 1 is a perspective view of a Santa Claus marionette constructed according to the principles of the present invention;

FIGURE 2 is a fragmentary exploded perspective view of the Santa Claus of FIGURE 1;

FIGURE 3 is a perspective view of a bird marionette constructed according to the principles of the present invention;

FIGURE 4 is another perspective view of the bird puppet of FIGURE 3;

FIGURE 5 is a top view of a blank for the Santa Claus head of FIGURE 1;

FIGURE 6 is a top view of a blank for machine manufacture of the bird head of FIGURE 3;

FIGURE 7 is a perspective view of a knight, hand puppet, or doll, constructed according to the principles of the present invention;

FIGURE 8 is a vertical cross-sectional view of the knight head of FIGURE 7;

FIGURE 9 is a top view of a blank for the machine manufacture of the knight head of FIGURES 7 and 8;

FIGURE 10 is a perspective view of a head, construted according to the present invention, shown erected;

FIGURE 11 is a perspective view of the head of FIGURE 10, shown nearly folded flat;

FIGURE 12 is a perspective view of another head constructed according to the present invention;

FIGURE 13 is a side view showing the head of FIGURE 12 folded flat;

FIGURE 14 is a perspective view of another head constructed according to the present invention; and

FIGURE 15 is a perspective view of another head constructed according to the present invention.

In general, puppets, marionettes, or doll, heads, according to one aspect of the present invention, comprise a pair of regular pyramids, base to base. For example, the head **20** of FIGURE 10 comprises four-sided pyramids **22** and **24** and the head **26** of FIGURES 12 and 13 comprises pyramids **28** and **30**.

The two pyramids are joined along two contiguous

edges 32, 34, having a common vertex. These edges form a hinge for a mouth opening 36.

According to another aspect of the invention, the head, when collapsed, forms a two layered regular polygon. For example, head 20 when flattened as shown in FIGURE 11 forms a hexagon. Two triangles of the hexagon, 38 and 40, have been removed to form the mouth opening 36. These triangles are defined by edges 42 and 44, having a common vertex, and the center 46 of the hexagon.

The head 48, shown in FIGURE 14, forms, when flat, a hexagon having a single triangle 50 removed therefrom to form the mouth opening, whereas the head 52 of FIGURE 15 forms, when flat, a septagon, having the triangles 54 and 56 removed therefrom.

It will be seen that only head 20 forms in one aspect, FIGURE 10, a double pyramid and in another, FIGURE 11, a two layered regular polygon. Thus, only the hexagon, having two triangles removed combines both aspects of the present invention as defined above. This is the preferred form of the invention.

Flat blanks (FIGURES 5, 6 and 9) may be employed for manufacturing doll heads according to this invention on automatic machinery. This is because the flat banks may be folded along the fold lines (shown dotted) through 180° folds by automatic machinery to form the head in flattened condition in which it may be conveniently shipped for subsequent erection at the point of use.

More particularly, referring to FIGURES 1 and 2, a Santa Claus marionette, generally indicated at 58, according to the invention, comprises a flat paper or fabric body portion 60 attached to a head, generally indicated at 62. The head 62 is formed of two four-sided pyramids, as shown in FIGURES 10 and 11. The hair, mustache, and nose 64 is formed of a flat piece of paper glued to two faces 66—66 of the upper pyramid. The beard 68 is unitarily formed with the lower pyramid and the peaked cap 70 is unitarily formed with the upper pyramid.

The marionette 58 is suspended from a bar 72 of heavy paper, cardboard, or the like by means of strings 74, 76, attached to the bar by adhesive tape 78, or other convenient means. String 74 passes through the upper pyramid and is attached to the lower pyramid near the mouth opening 36. This attachment may be made by passing the string through the lower pyramid and knotting it or by gluing it to the lower pyramid or affixing it with adhesive tape or any other convenient means. String 76 is attached by similar convenient means to the back of the pyramid at 80. By manipulating the bar 72 about an axis transverse to the plane of the strings 74 and 76, the mouth opening 36 may be opened as in FIGURE 1, or closed as in FIGURE 2.

Now referring to FIGURES 3 and 4, a bird head 82, according to the present invention, is similarly formed of two four-sided pyramids, as shown in FIGURE 10. Paper tail feathers 84 and wings 86 are affixed by means of glue or the like. Front string 88 passes through the vertex 89 of the upper pyramid and is attached to the lower pyramid towards the mouth opening 36. Back string 90 is attached to a tab 92 at the rear vertex of the bird 82. It will be seen that edges 94 have been cut into the faces 96—96 in order to provide additional realism to the mouth opening. Similarly, edges 98 extend beyond faces 100—100 for the same purpose, as does tab 102.

Alternatively, front string 88 may be attached to ridge 102 if the folded edges of the head 82 retain enough energy so that the head is self-erecting, as is the case with certain stiff cardboards, papers and the like.

Now referring to FIGURES 5 and 6, the marionette heads of FIGURES 1 through 4 may each be conveniently manufactured out of a single blank of paper, cardboard, thin plastic, or the like. For example, referring to FIGURE 5, the Santa head 62 may be originally cut from a flat piece, as shown. The side viewed in FIGURE 5 may be printed with one color as it is the interior of the head. The obverse side may be printed with multicolors to provide realism. The blank may be scored for folding and cut as indicated. Scores for folding are indicated by dotted lines and cuts by solid lines. The cuts reduce the amount of force required to bend along the score lines and, thus, increase the animation of the head in use.

The head 62 is assembled by first turning upwardly through 180° tabs 104 and then coating their obverse sides (as seen in FIGURE 5) with adhesive. The blank is then folded upwardly along line 106 and downwardly along line 108. The Santa head is then completely assembled except for the optional beard 68 which in the blank is in two pieces, one of which has a tab 110. Tab 110 may be turned, adhesive applied, and the two pieces of the beard turned backwardly flat against the head to be held by the glue tab 110 in a manner which will be obvious to those having ordinary skill in the paper folding art. Since every fold in assembly is through 180°, the Santa head may be assembled on automatic machinery.

The bird head 82 is even simpler to assemble on automatic machinery. Glue is first applied to the speckled areas. Tabs 112 and 114 are then turned 180° flat against their contiguous triangles. The leftmost portion 115 is then turned upwardly 180° along score line 116 so that tab 114 becomes glued there against. Then, rightmost portion 118 is folded upwardly 180° about score line 120 and is held by glue at tabs 112 and 122. Thereafter, the tail 84 and wings 86 (FIGURES 3 and 4) may be added, as well as tab 92, and support strings 88 and 90.

A knight hand puppet or doll head 124, according to the invention, is shown in FIGURES 7, 8, and 9. It is constructed of two four-sided pyramids, base to base, as shown in FIGURE 10, and folds flat to a hexagon, as shown in FIGURE 11. Contiguous opposed faces 126 are extended beyond edges 128—128 in portions 130—130 so that a visor 132 may be attached at an angle to the surfaces 126—126. Face portion 134 may be included. It is formed of a flat piece of material attached to the lower mouth portion. Plume 136 may be attached by glue or any other suitable means and a fabric body 138 employing stiff paper hands 140 and feet 142 provides good animation.

The mouth portion 36 is biased closed by means of a rubber band 144 engaged between two stiff tabs 146. Plume 136 is conveniently glued to one of the tabs 146. After the rubber band 144 is installed, the head 124 is self-erecting.

The basic knight head may be formed out of the blank shown in FIGURE 9. In this case, tabs 148—148 and 146—146 are turned upwardly through 180° along score lines 150—150 and glue is then applied to the upper surface thereof. Similarly, the portions 152—152, forming one-half of the completed tabs 146, are folded upwardly through 180°. Glue may be applied to speckled flanges 154 for holding tabs of the face portion 134, not shown, which may be engaged therewith as the blank is finally folded along score line 156 to form the completed knight head. The rubber band 144 may then be stretched between the flanges 146 by a suitable tool or by using the fingers. The rubber band 144 will cause the two portions of the pyramid to close, as shown in FIGURES 8 and 10. They may be opened by applying pressure to the vertexes 158 transverse thereto by means of the fingers as shown in FIGURE 7.

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

1. A puppet having:

(A) a head portion formed from a single flat blank of foldable material in two substantially matching polygons joined along a common fold line coinciding with one straight outer edge of each polygon and each having removed therefrom a sector-shaped cutout portion bounded by at least one second corresponding straight outer edge, and

(B) at least one protruding body portion joined to at least one of said polygons of the head portion at a region adjacent to a third straight outer edge,

whereby the blank may be erected into a base-to-base mating pyramid structure by anchoring together the bounding radial edges of the sector-shaped cutout of each polygon to form mating upper and lower dual pyramids defining a closed hollow puppet head, having conjoined thereto in protruding relationship an outwardly-extending body portion simulating a puppet body decoratively cooperating with said puppet head.

2. The puppet defined in claim 1, wherein the two matching polygons are hexagons each having sector-shaped regions bounded by two adjacent sides forming corresponding matching cutout portions of the hexagons.

3. The puppet defined in claim 1, wherein corresponding straight outer edges of each polygon adjacent to said common fold line edge are joined together to secure the pyramids in mating base-to-base juxtaposition, with other corresponding polygon edges being left unconnected to form a puppet mouth-opening in the closed hollow puppet head enlargeable by defoming distortion of the hollow dual-pyramid puppet head.

4. The puppet defined in claim 1, further including at least a first string for suspension thereof passing through a suitable aperture in the upper pyramid and anchored to an inside surface of the lower pyramid.

5. The puppet defined in claim 1, including tension spring means joining and urging toward each other the apices of the dual pyramids.

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U.S. Cl. X.R.

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