June 9, 1931. H. E. LUHRS 1,809,635

MANIKIN

Filed Sept. 13, 1930 3 Sheets-Sheet 1

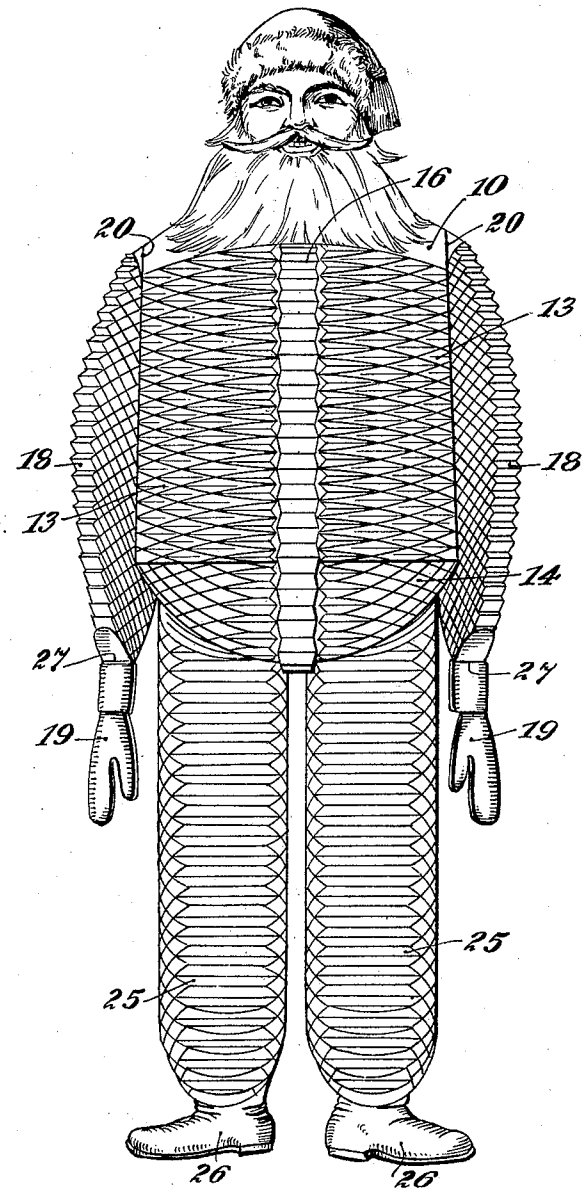
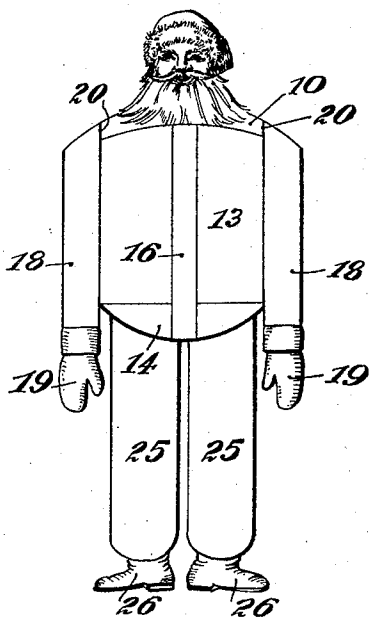


Fig. 1.

Fig. 2.



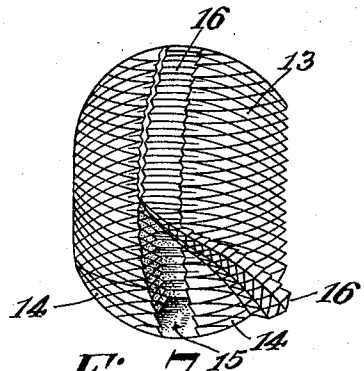


Fig. 7.

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MANIKIN

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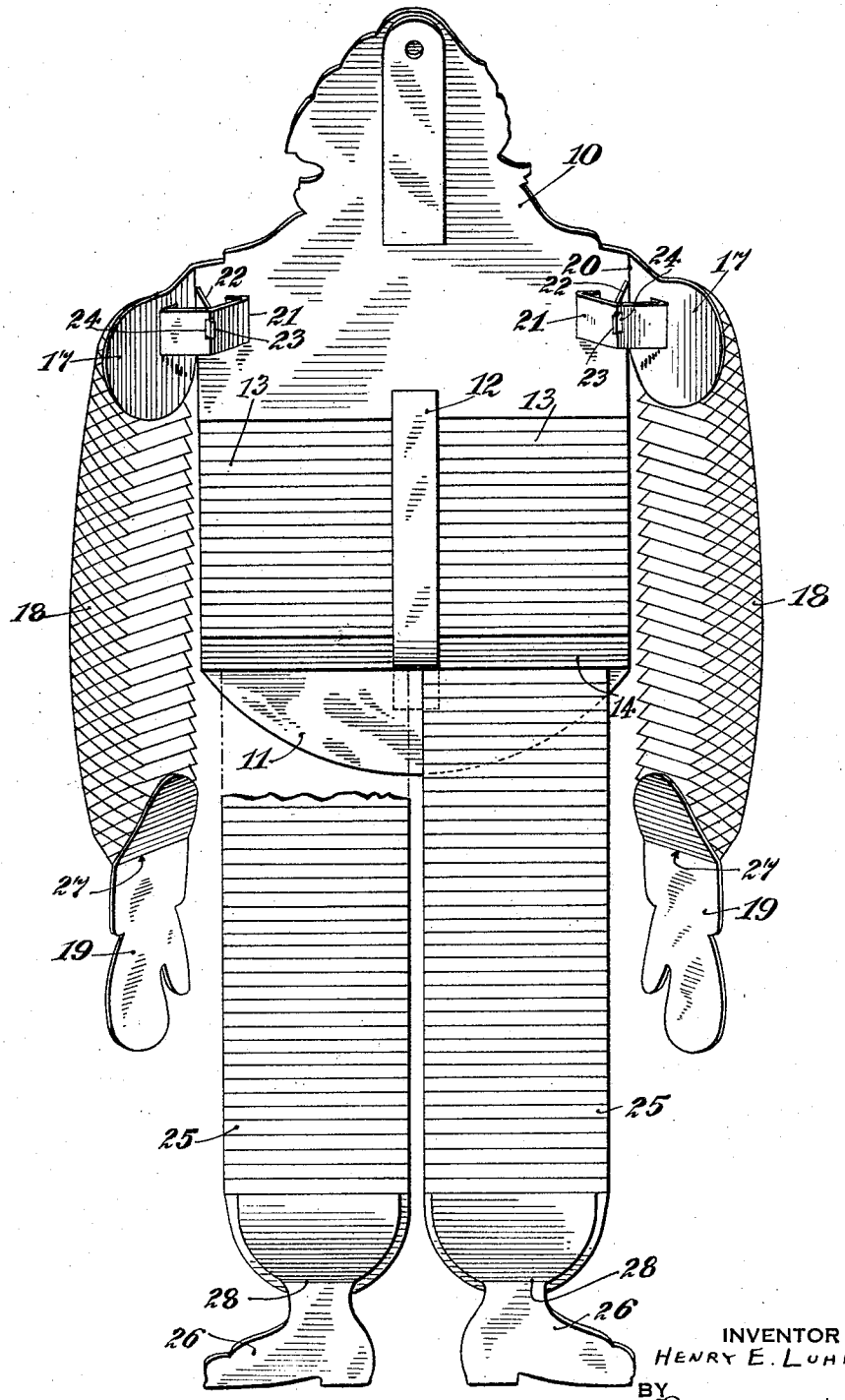


Fig. 3.

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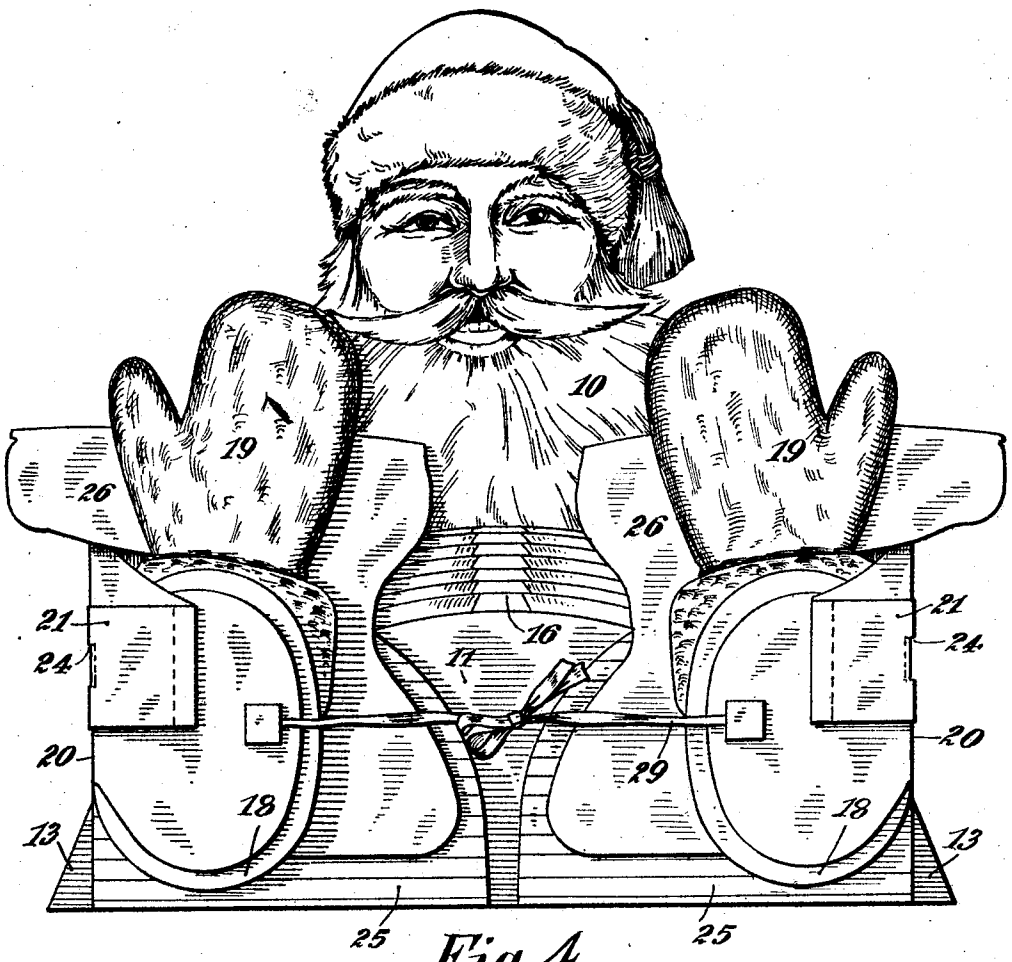


Fig. 4.

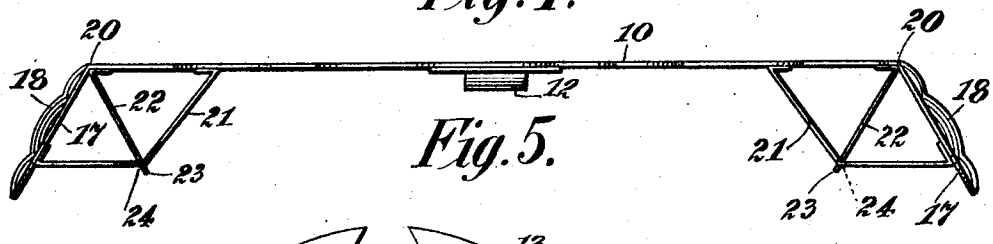


Fig. 5.

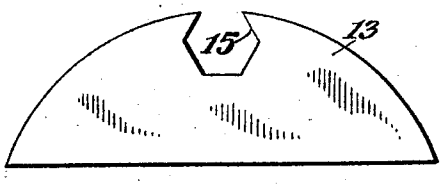


Fig. 6.

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UNITED STATES PATENT OFFICE

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MANIKIN

Application filed September 13, 1930. Serial No. 481,630.

This invention relates to a manikin or manlike figure in which a major portion of the figure is composed of expansible cellular tissue paper.

A principal object of the invention is to provide an ornamental figure of this character that can be compactly folded into a small space.

An additional object is to produce a figure in which the foundation for the body is formed of several relatively small pieces connected together in such a way that the tissue paper forming the body portion is free to move and give the familiar "bowl of jelly effect." Other features of the invention reside in the construction whereby the arms are given a life-like position and the hands and feet hang at natural angles.

While a preferred form of the invention has been disclosed for purposes of illustration, it should be understood that various changes and modifications may be made without departing from the spirit and scope of the invention as hereinafter set forth and described.

Referring to the drawings more particularly:

Figure 1 is a front elevation of a manikin formed according to the present invention.

Figure 2 is a diagrammatic front elevation showing the appearance of the figure before the arms have been folded back to their final position.

Figure 3 is a rear elevation partly constructed of the figure shown in Figure 1.

Figure 4 is a plan view showing the manikin in folded position.

Figure 5 is a top view of Figure 3 with parts omitted.

Figure 6 is a plan view of the body pieces during the course of manufacture.

Figure 7 is a fragmentary perspective showing the assembly and construction of the body pieces.

Referring to the drawings more particularly, the part 10 is a flat piece of cardboard or other similar material suitably formed to represent the head and shoulders of the manikin and comprises the shoulder piece. The part 11 is a segment-shaped piece of the same material that forms the support for the lower part of the body, or hip piece, and the two parts 10 and 11 are fastened together by a strip 12 of flexible material such as paper. The parts 10, 11 and 12 form a folding foundation for the body of the figure and when the figure is hanging in the upright position the hip piece 11 is suspended at a predetermined distance from the shoulder piece 10 by reason of the flexible strip 12. The body portion is formed of cellular tissue paper disposed with the openings of the cells running transversely of the body as will be clear from Figures 1 and 3. The upper end of the cellular tissue comprising the body is attached to the front side of the piece 10 and the lower end of this tissue is attached to the front side of the piece 11. This tissue bulges forwardly to simulate a body and as the intermediate and major portion of the tissue is not supported, it is free to move with the "bowl of jelly" effect when the support for the manikin is moved to and fro in a vertical direction.

In some cases, such as in Santa Claus figure illustrated, it is desirous to form the body of several different colors of tissue and particularly to have a strip of a different colored tissue run vertically down the center of the body to represent fur trimming on a coat, or any other vertical garment line. For this purpose the main body section of the expansible tissue, which is indicated at 13, is formed of red tissue, and a smaller section 14 of white tissue is pasted at the lower end of the red tissue, the section 14 being used to represent the fur trim at the bottom of the coat. This operation merely involves pasting together two flat pieces of the tissue in a well-known manner. In order to insert a piece of expansible tissue to represent the vertical fur line of the coat, it is necessary to have this piece run across the openings of the cells of the tissue comprising the body piece 13 and hence run across the natural paste lines of the tissue, thereby involving certain difficulties. Applicant has attached this vertical piece of tissue by inserting it in an undercut channel formed in the body tissues.

In forming the body of the figure the piece of tissue 13 is first cut to the desired size and shape and a second piece 14 of white tissue is pasted to one end of the piece 13. The combined pieces 13 and 14 are kept in a folded-flat condition while a hexagonal opening 15 is punched through the plies forming the cellular tissue of the pieces 13 and 14 adjacent the side which is to form the front of the body. One side of punched hole 15 is open so that when the pieces 13 and 14 are expanded as shown in Figure 7, the opening 15 becomes an open undercut groove of hexagonal shape. A piece of white cellular tissue 16 is cut, while in the flat folded condition, to a hexagonal shape and size corresponding with the opening 15, and is placed in the opening 15.

The next operation is to paste one side of the flat composite body member which includes the pieces 13, 14 and 16 to the front side of the flat shoulder piece 10, while the opposite side of the composite body member is pasted to the hip piece 11. As the result of this construction, when the figure is suspended in a vertical position, the body piece opens to the position illustrated in Figures 1, 3 and 7. It will, of course, be understood that it is not essential to have the opening 15 and the piece 16 of hexagonal cross-section, but it is preferred to have the groove 15 undercut and to have the piece 16 formed so that its sides extend under the overhanging edges of the groove in order to assist in keeping the strip 16 in place.

A shoulder flap 17 projects from each side of the shoulder piece 10 and a piece of red expansible tissue 18 is used for each arm, the upper end of each arm 18 being pasted to the front of the shoulder flap 17, while the lower end is pasted to the front of a piece of cardboard 19 which represents the hands. If the shoulder flaps 17 were permitted to remain in the plane of the shoulder piece 10 when the figure is in vertical position, the arms would hang in an unnatural position as illustrated in Figure 2, but by bending the shoulder flap to the rear at an angle of about 45° to the piece 10, the arms hang in a much more natural and life-like position as illustrated in Figure 1. The shoulder flaps are therefore scored for ready bending along the vertical lines 20 and means is provided to retain the flaps in the rearwardly bent position. In the form illustrated this retaining means takes the form of a strip 21 of paper or other suitable flexible material which extends across the score line 20 and has one end attached to the foundation piece 10 and the other end attached to the shoulder flap 17. A foldable tab 22 is attached along the score line 20 and has its outer end formed with a tongue 23 which engages in a slot 24 cut in the strap 21. The tabs 22 can be punched from the material of the piece 10, or from the shoulder flap 17, and can be located anywhere convenient between the ends of the strip 21 so long as they work properly.

When the manikin is in the folded-up position illustrated in Figure 4, the foldable tab 22 lies flat against the foundation piece 10. The shoulder flaps are folded forward against the front of the figure and the strap 21 extends over the hinge joint, as clearly illustrated in Figure 4. After the figure has been unfolded to the open position of Figure 1, the arm flaps are bent toward the rear and the foldable tabs 22 are pushed upwardly to engage the slots 24, as illustrated in Figure 5. It will be clear that any other suitable means could be used for holding the shoulder flaps in their rearwardly directed position.

Each leg of the manikin is formed by a piece of suitably shaped red expansible tissue 25 which has its upper end secured to the rear side of the hip piece 11 and its lower end fastened to the front side of a piece of cardboard 26 shaped to represent the foot of the figure.

The pieces 19 and 26 representing the hands and feet are pasted against the flat wall of the last row of cells on each of the arm and leg pieces and as a result the hands and feet would hang at a forwardly inclined angle if the pieces 19 and 26 remained flat and in a single plane. To avoid this unnatural appearance the hand pieces are scored on the lines 27, which correspond roughly to the wrists of the figure, and the foot pieces 26 are scored along the lines 28, corresponding to the ankles of the figure. The hands and feet are then bent downwardly along these scored lines so that they fall in a natural vertical position.

After the body, arms and legs have been folded up, the figure forms a very flat compact package as shown in Figure 4, and the parts may be held together for handling and shipping by a tie-string 29. Due to the efficient method in which the parts can be folded together, it is possible to make the manikin life-size and still fold it into a reasonably small package for shipping and storage.

I claim:

1. A figure comprising a piece of sheet material comprising a shoulder piece, a piece of sheet material comprising a hip piece, the hip piece being spaced from the shoulder piece, a supporting strip of flexible material attached to the shoulder piece and to the hip piece, and expansible cellular tissue forming the body of the figure, one end of the body tissue being attached to the front of the shoulder piece and the other end of the body tissue being attached to the front of the hip piece.

2. A figure comprising a body piece forming the shoulders of the figure, a shoulder flap hingedly attached to each side of the

body piece, an arm carried by each shoulder flap, and means to hold each shoulder flap in a position rearwardly of said body piece.

3. A figure comprising a body piece forming the shoulders of the figure, a shoulder flap hingedly attached to each side of the body piece, an arm formed of expansible tissue carried by each shoulder flap, and means to hold each shoulder flap in a position rearwardly from said body piece.

4. A figure comprising a body piece formed of sheet material, a shoulder flap attached to each side of the body piece along a vertical hinge line, a strip of flexible material extending across the hinge line and having one end attached to the shoulder flap and its other end attached to the body piece, a support member arranged to hold the intermediate part of the strip away from the hinge line when the parts are opened, and an arm carried by each shoulder flap.

5. A figure comprising a body piece formed of sheet material, a shoulder flap attached to each side of the body piece along a vertical hinge line, a strip of flexible material extending across the hinge line and having one end attached to the shoulder flap and its other end attached to the body piece, a support member arranged to hold the intermediate part of the strip away from the hinge line when the parts are opened, and an arm formed of expansible tissue carried by each shoulder flap.

6. A figure comprising arm members formed of expansible tissue, a hand member formed of sheet material attached to the lower end of each arm member, each hand member being bent along a transverse line at the wrist to permit the hand to hang in a natural vertical position.

7. A figure comprising leg members formed of expansible tissue, a foot member formed of sheet material attached to the lower end of each leg member, each foot member being bent along a transverse line at the ankle to permit the foot to hang in a natural vertical position.

8. An ornamental device comprising a piece of expansible cellular tissue formed with a groove running transversely to the longitudinal axes of the cells, and a second piece of expansible cellular tissue disposed in and substantially filling the groove.

9. An ornamental device comprising a piece of expansible cellular tissue formed with an undercut groove running transversely to the longitudinal axes of the cells, and a second piece of expansible cellular tissue disposed in the groove and extending under the overhanging edges of the groove.

10. An ornamental device comprising a member of expansible cellular tissue, a foundation piece attached to one end of the tissue member, a second foundation piece attached to the other end of the tissue member, the tissue member having its cells disposed with their longitudinal axes substantially parallel to the foundation pieces, the tissue member being formed with a groove extending from one foundation piece to the other, and a second piece of cellular tissue disposed in the groove with the longitudinal axes of its cells parallel to the longitudinal axes of the cells of the first tissue member and having its ends attached to the foundation pieces.

11. An ornamental device comprising a member of expansible cellular tissue, a foundation piece attached to one end of the tissue member, a second foundation piece attached to the other end of the tissue member, the tissue member having its cells disposed with their longitudinal axes substantially parallel to the foundation pieces, the tissue member being formed with an undercut groove extending from one foundation piece to the other, and a second piece of cellular tissue disposed in the groove with the longitudinal axes of its cells parallel to the longitudinal axes of the cells of the first tissue member and having its ends attached to the foundation pieces.

12. A figure comprising a body piece forming the shoulders of the figure, a shoulder flap hingedly connected to each side of the body piece along a vertical hinge line, an arm carried by each shoulder flap, and means cooperating with said vertical hinge connection to hold each shoulder flap in a position rearwardly of said body piece.

HENRY E. LUHRS.