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L. L. GRENEKER

2,215,500

DISPLAY FORM

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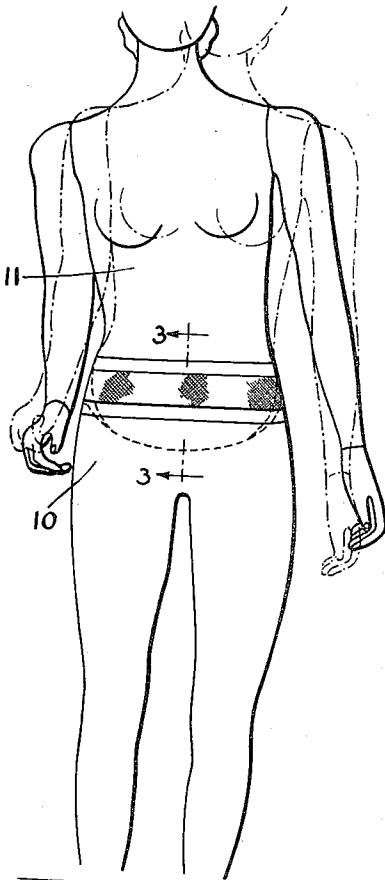


Fig. 1.

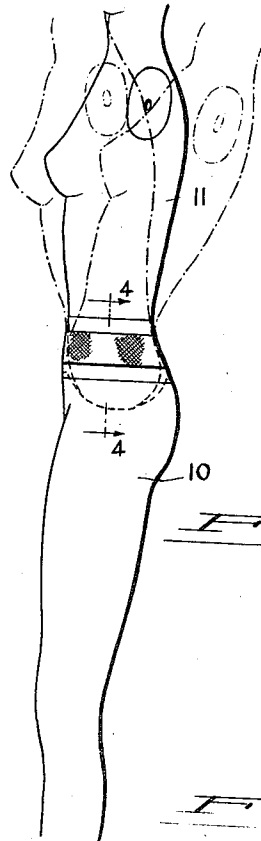


Fig. 2.

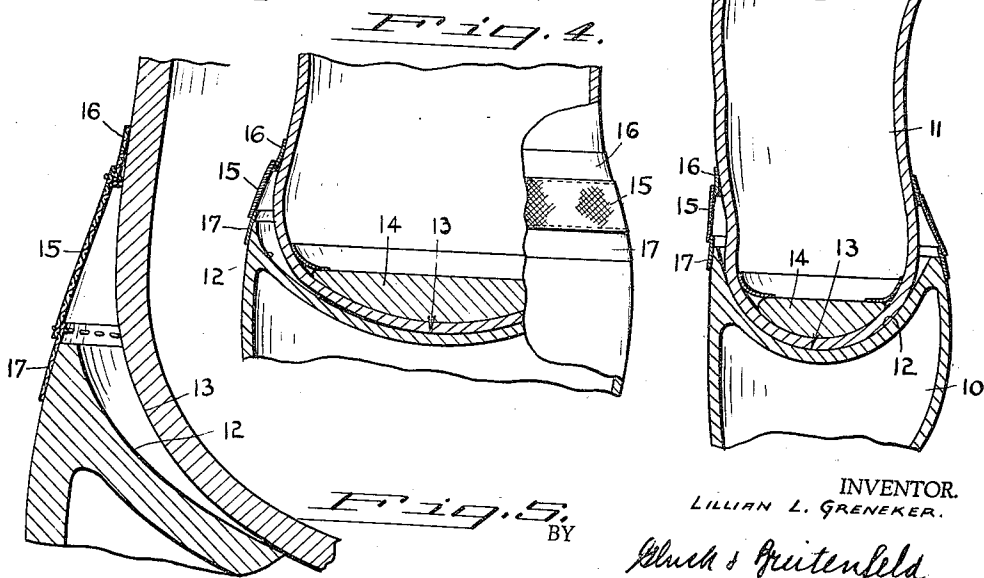


Fig. 3.

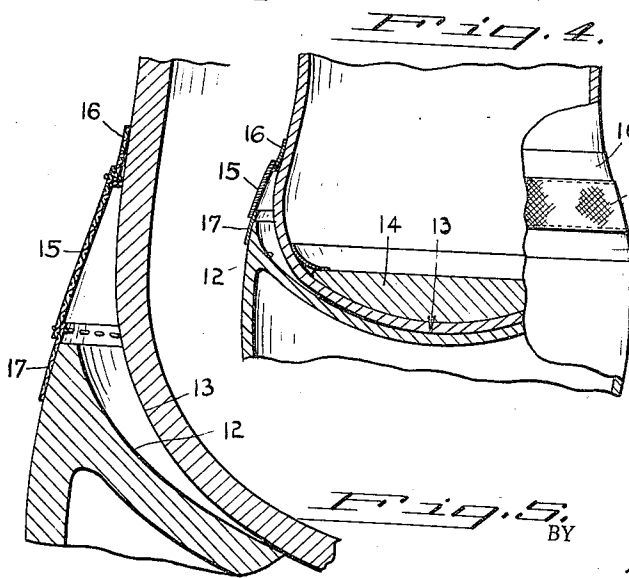


Fig. 4.

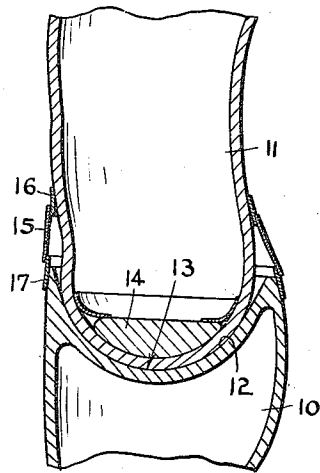


Fig. 5.

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2,215,500

DISPLAY FORM

Lillian L. Greneker, New York, N. Y.

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3 Claims. (Cl. 223-63)

My present invention relates generally to display devices and has particular reference to a display form conforming to the general contours of the human figure.

It is a general object of the invention to provide certain structural improvements in a display form intended for use in store windows and the like, for the purpose of supporting and displaying garments.

Such a display form is usually the full size of the human figure which it represents, and it must have a smooth continuity of surface contour to permit a garment to hang properly and attractively, just as it would on a real human figure. The importance of a smooth contour increases where the garment is of relatively sheer or tight-fitting tailored character.

A display form of this general character should also be somewhat adjustable, so that it may be bent or tilted at the waist or other selected regions. To provide such adjustability, while at the same time maintaining the desirable smooth continuity of contour, presents a problem which I have heretofore successfully solved in the manner illustrated in my copending patent application Serial No. 211,401, filed June 2, 1938.

I have now discovered that this general objective can also be achieved by a structural arrangement which is of somewhat simpler character.

In accordance with my present invention, two entirely separate sections are arranged in contacting adjacency, one of the contacting surfaces defining a smoothly rounded convexity, the other a corresponding concavity, and a band of stretchable material is used in a novel manner for concealing the joint and providing the smooth but adjustable continuity of contour. By this arrangement, the desired tiltability is achieved, not necessarily to the complete extent possible with the construction illustrated in my copending patent application, but to a degree which is wholly adequate and satisfactory for many uses to which the display form may be put.

I am fully aware of the usefulness of the common ball and socket joint, wherever adjustability of two members is desired, but such a joint, being necessarily spherical, has certain limitations which make its employment in a life-size display form unfeasible and relatively expensive, especially in connection with the provision of tiltability in the torso portion, e. g., at the waist.

It is a special feature of my present invention to provide cooperating convex and concave surfaces which are non-spherical. In applying the

invention to the waist portion, for example, both of these surfaces are substantially semi-ellipsoidal, by which I mean to refer to a shape which is, in cross-section, somewhat elongated like the waist portion of the human figure. I have found that adequate tiltability can be achieved, notwithstanding the non-spherical shapes that are employed, if the convex surface is purposely allowed to fit somewhat loosely, and not too snugly, within the corresponding concavity. Preferably the concavity is slightly oversized with respect to the convexity.

Regardless of the particular shape which the convex and concave surfaces may assume, it is a further feature of my invention to employ a special type of flexible band which functions in a unique manner to maintain the desired smoothness of contour at all times. The band comprises a main portion which is composed of a loosely woven or netted fabric of the type which is commonly said to embody a two-way-stretch. This fabric is tautly arranged across the joint between the sections, with the strands oblique to the joint, and I prefer to use marginal attaching portions which are secured in snug relationship to the adjacent outer surfaces of the two sections.

I achieve the foregoing objects and such other objects as may hereinafter appear or be pointed out, in the manner illustratively exemplified in the accompanying drawing in which—

Figure 1 is a fragmentary front elevational view of a display device embodying the features of the present invention;

Figure 2 is a view of the device of Figure 1 taken from the side;

Figure 3 is an enlarged fragmentary cross-sectional view taken substantially along the line 3—3 of Figure 1;

Figure 4 is an enlarged cross-sectional view taken substantially along the line 4—4 of Figure 2; and

Figure 5 is a greatly enlarged fragmentary view of the left hand portion of Figure 4.

In the construction which I have chosen for illustration, the display device comprises the two separate sections 10 and 11. The upper portion of the section 10 conforms to the general contour of the thigh and waist portions of the human figure. Its upper surface defines the smoothly rounded concavity 12.

The lower portion of the upper section 11 conforms to the general contour of the abdominal portions of the human figure, and its lower surface defines the smoothly rounded convexity 13. It will be observed that this convexity merges

smoothly and gracefully with the outer surface of the section 11, above the region where this section is associated with the section 10.

The upper section rests by gravity upon the lower section, the convexity 13 fitting easily into the concavity 12. The latter is preferably of slightly oversized nature, as is shown most clearly in Figures 3, 4 and 5. To facilitate the association of the parts, it may be preferable to weight the upper section, and I have illustratively shown the arrangement of a relatively heavy mass or body 14 within the lower portion of the section 11.

The sections 10 and 11 may be composed of any desired material, but for purposes of economy and simplicity of manufacture, and to provide a structure which is of adequate lightness in weight, I prefer to make the sections in the form of hollow bodies, the walls being preferably composed of paper. One way of conveniently manufacturing the sections is to build up these walls on the inside of suitable plaster molds.

The band of flexible material, hereinbefore alluded to, comprises the main portion 15, which is of relatively heavy two-way-stretch fabric. This band is arranged tautly across the joint between the sections 10 and 11, as shown most clearly in Figures 4 and 5. A preferred way of accomplishing this is to secure the portion 15 to the marginal attaching portions 16 and 17, each of which is of relatively thin fabric or other suitable material. The marginal portion 16 is secured, preferably, by nails, tacks, or adhesive, to the outer surface of the section 11, at a region slightly above the joint that is to be concealed. The lower marginal portion 17 is similarly secured to the outer surface of the section 10, adjacent to the upper edge of the rim of this section. The marginal portions 16 and 17 are snugly held in position, and this arrangement, coupled with the relatively thin nature of these marginal portions and the taut condition of the fabric 15, provides a smooth continuity of contour which is maintained at all times and which is admirably adapted to underlie and support any garment that may be fitted over the display device.

In Figure 1 I have shown by dot-and-dash lines how the upper section 11 may be tilted, relative to the lower section 10, this adjustment being a sidewise tilting of somewhat limited character, but nevertheless adequate for the present purpose. In Figure 2 I have shown by dot-and-dash lines how the upper section 11 may be tilted, to a slightly greater degree, in a forward and rearward direction. Corresponding degrees of tiltability in slightly oblique directions are also permitted.

One of the advantageous features of the present construction lies in the fact that a tilting of the upper section rearwardly maintains a smoothly rounded contour at the abdomen, which is quite realistic; and a sidewise tilting produces a realistic contour which simulates the elevation of the thigh at the side of the figure. These desirable effects are the direct result of the convex shape, as indicated in the drawing, that is imparted to the upper section.

This relative adjustability of one section with respect to the other is permitted by the relatively loose relationship between the convexity on one section and the concavity on the other; and during all these possible adjustments, the band which covers the joint between the sections is adapted to yield, stretch, and contract, without

impairing the smoothness of the contour in the adjustable region.

If desired, the sections 10 and 11 may be provided with shallow shoulders or ridges against which the marginal attaching portions 16 and 17 may rest, thereby avoiding even the slight interruption of smoothness of contour at the outer edges of these attaching portions. Under certain circumstances, the attaching portions 16 and 17 might be disposed with entirely, and the main stretchable fabric may be secured directly to the outer surfaces of the two sections.

The outer surfaces of the display device may, to advantage, be ornamented with a series of overlapping paper patches or the like, and where this ornamentation is resorted to, it is a relatively simple matter to overlap adjacent paper patches with the attaching portions 16 and 17, thereby further enhancing the smoothness of the external surface of the figure.

It will be understood that the convexity might, if desired, be provided on the lower section, and the concavity on the upper section, and my invention is obviously not restricted to the specific device herein illustrated merely by way of example. Also, it will be understood that a similar adjustable joint may be provided at other portions of the figure, e. g., slightly above the waist portion, or at the neckline, or elsewhere. In fact, where the figure includes three sections, viz., a thigh section, an abdominal section, and a chest section, the abdominal section having a convexity at its lower end and a concavity at its upper end, and the chest section having a convexity permitting it to rest on the abdominal section, just as the abdominal section rests on the thigh section, a highly effective and realistic degree of tiltability is capable of achievement.

It should be noted that, in accordance with my invention, relative adjustment is capable of accomplishment at any selected region, regardless of what the cross-sectional configuration of such region may be, and without the limitations that would be imposed by an attempted use of an ordinary spherical ball and socket joint.

In general, it will be understood that changes in the details herein described and illustrated for the purpose of explaining the nature of my invention, may be made by those skilled in the art without departing from the spirit and scope of the invention as expressed in the appended claims. It is, therefore, intended that these details be interpreted as illustrative, and not in a limiting sense.

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

1. In a display form conforming to the general contours of the human figure, a lower section, and a separate upper section resting upon it, one of the contacting surfaces defining a smoothly rounded substantially semi-ellipsoidal convexity, the other defining a corresponding concavity, the concavity being appreciably oversized with respect to the convexity and the convex and concave walls being spaced from each other at their sides so that one section is tiltable relative to the other, and a band of stretchable material arranged tautly across the joint between said sections to provide a smooth but adjustable continuity of contour between said sections.

2. In a display form, a lower section conforming to the general contours of the thigh and waist portions of the human figure, the upper surface

of said section defining a smoothly rounded concavity of substantially semi-ellipsoidal shape, an upper section whose lower portion conforms to the general contours of the abdominal portions
5 of the human figure, the lower surface defining a smoothly rounded convexity, also of substantially semi-ellipsoidal shape, said upper section resting within said concavity, said concavity being appreciably oversized with respect to said convexity
10 and the convex and concave walls being spaced from each other at their sides, whereby the upper

section is tiltable relative to the lower one, and a band of stretchable material encircling the waist portion of the device and arranged tautly across the joint between said sections to provide a smooth but adjustable continuity of contour
5 between said sections.

3. In a display form, the combination set forth in claim 1, said convexity being on the upper section, and said section being weighted at the base thereof.

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