May 28, 1963 W. H. DECKER 3,091,141

FABRIC-FACED BELT-BUCKLE AND FORMING DEVICE

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Fig 1.

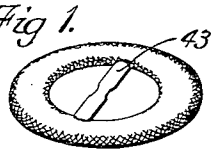


Fig 2.

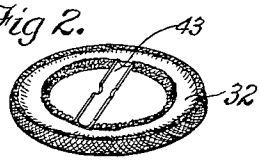


Fig 3.

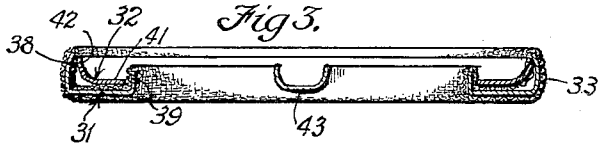


Fig 4.

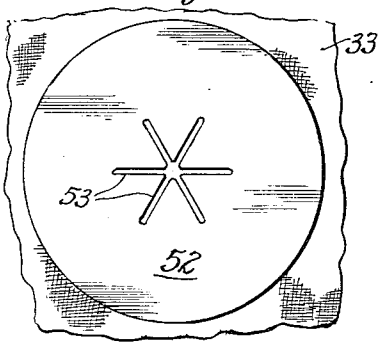


Fig 5.

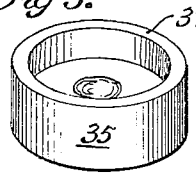


Fig 6.

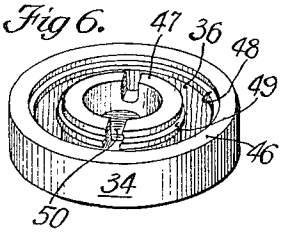


Fig 9.

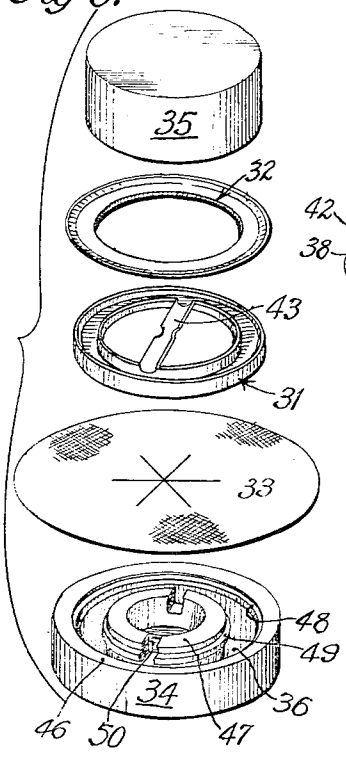


Fig 8.



Fig 7.

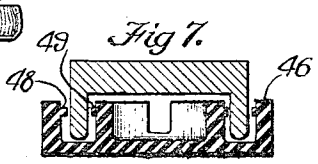


Fig 10.

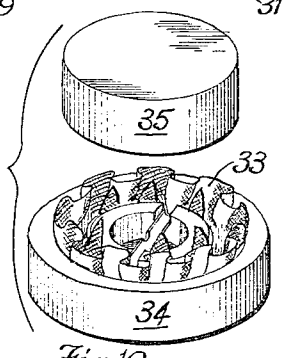


Fig 11.

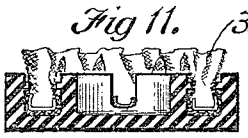


Fig 12.

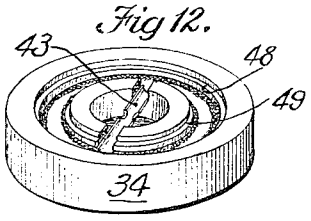
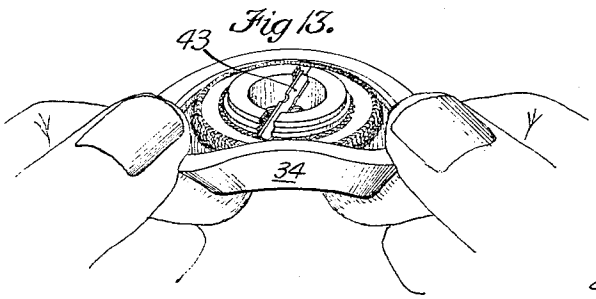


Fig 13.



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Fig 14.

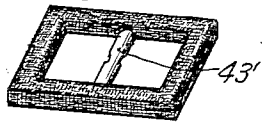


Fig 16.

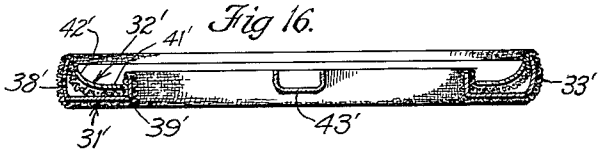


Fig 15.

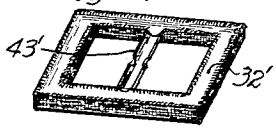


Fig 17.

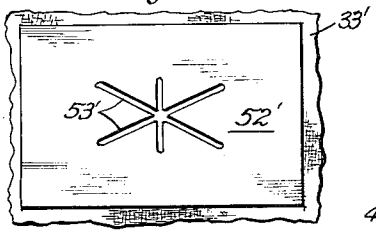


Fig 18.

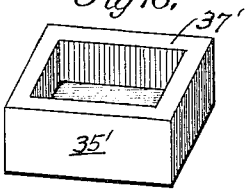


Fig 22.

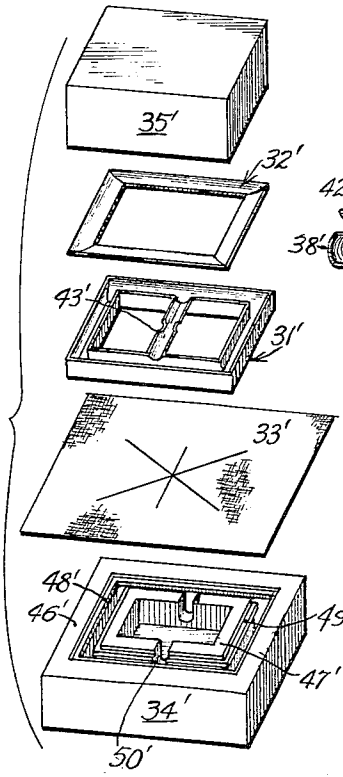


Fig 19.

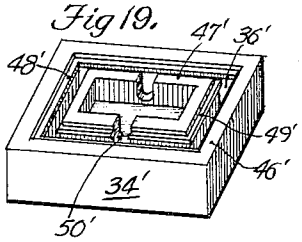


Fig 21.

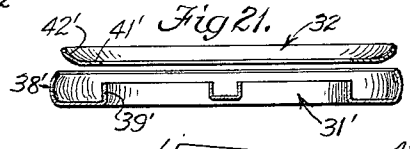


Fig 20.

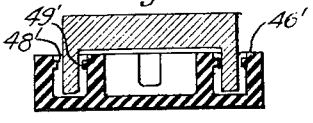


Fig 23.

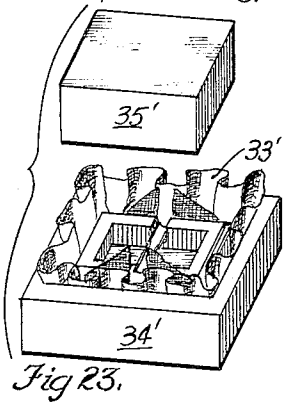


Fig 24.

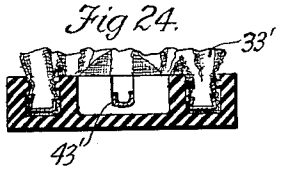


Fig 25.

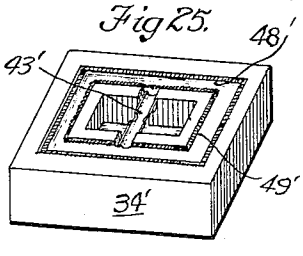
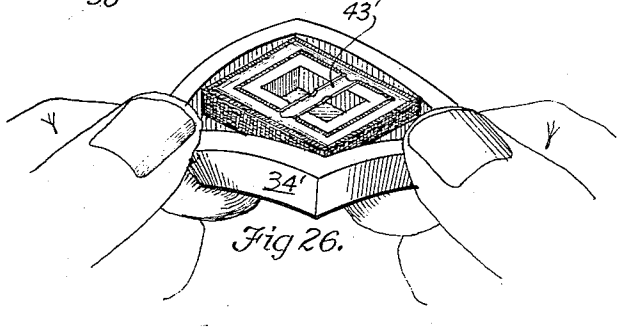


Fig 26.



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Edwin Thiepe

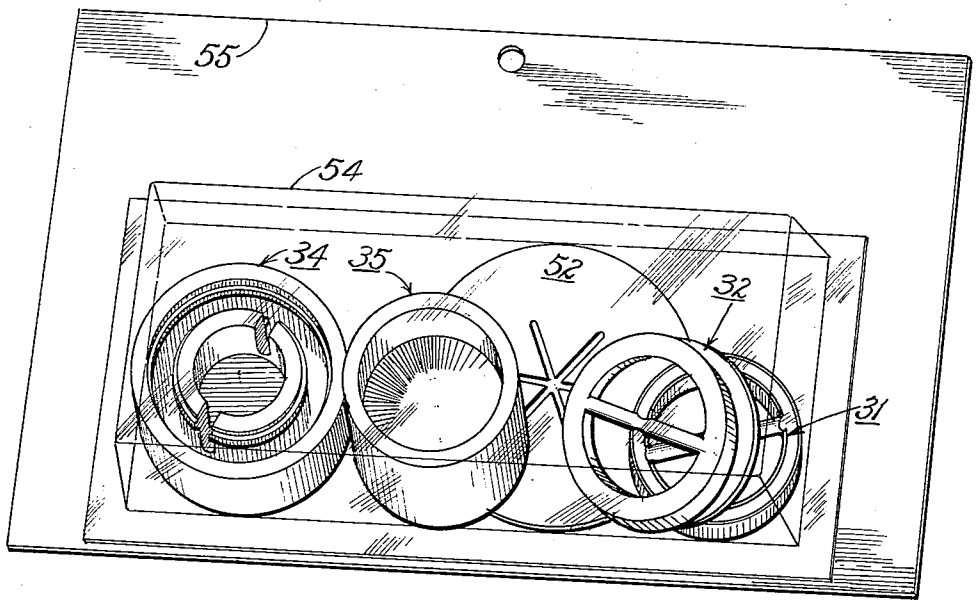
Attorney

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FABRIC-FACED BELT-BUCKLE AND FORMING DEVICE

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Fig 27.



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Erwin Phelps

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United States Patent Office 3,091,141 Patented May 28, 1963

3,091,141

FABRIC-FACED BELT-BUCKLE AND FORMING DEVICE

William H. Decker, Chicago, Ill., assignor to Maxant Button & Supply Company, a corporation of Illinois

Filed Oct. 26, 1959, Ser. No. 848,579
10 Claims. (Cl. 79—5)

This invention relates to a device for forming fabric-faced buckles for a variety of uses such as garments, hats, shoes, and upholstering, especially by the individual professional or do-it-yourself workman.

For individually-tailored garments, having belts, it is frequently desired to have the metal base for such buckles faced with the same fabric as, or contrasting with, that from which the garment is fashioned. Similarly, hats and other items may also be trimmed with fabric-covered buckles. This is done generally where only one such buckle is required.

For years buckle bases of nearly every imaginable contour and size have been available in stores supplied by the manufacturers of dressmaking accessories. These variously-shaped buckle bases generally comprise two metal stampings with flanged perimeters so dimensioned that one part nests within the other part. More often than not, these base parts will have cross bars whereon to hinge a tong.

Heretofore, the only known means and method by which the desired fabric-faced buckles could be made by hand was first by adhering a piece of fabric over the outer face of the larger of the buckle base parts with the fabric perimeter overlaying the inner face of the base part and subsequently superimposing the other base part on and pressing it down into the overlaid fabric and, with a suitable tool such as a pair of pliers, turning in the perimeter of the fabric-covered flange of the one base part to secure the other base part in nested relationship.

The foregoing procedure is awkward and slow to handle and, until one becomes experienced, the finished buckle is not always of acceptable appearance. A main objection to such buckles is that the adhesive is likely to stain the cloth in washing or cleaning.

The main objects of this invention are to provide an improved buckle-assembling device for effecting the interlocked nested positioning of two buckle base parts with fabric tautened over the face of one base part and the perimetrical portion of the fabric interposed between the two base parts; to provide a two-element assembling device of this kind in one of which elements the fabric and the buckle base parts are successively depressed by the other element to effect the final interlocking nested positioning of the two base parts solely by the fabric tautened over the one base part and interposed and tucked in between the two base parts; to provide an improved two-element assembling device of this kind adapted to be contoured to accommodate buckle base parts of practically any size and shape; and to provide an improved fabric-faced buckle-assembling device of this kind of such simple structure as to make its manufacture very economical and its use extremely facile by even the most inexperienced persons.

The drawings illustrate the form and function of two adaptations of fabric-faced buckle-assembling devices constructed in accordance with this invention, wherein

FIGS. 1 and 2 are perspective views of the front and back respectively, of a fabric-faced circular buckle formed with an appropriate adaptation of this assembling device;

FIG. 3 is an enlarged cross-section of the finished buckle as shown in FIGS. 1 and 2;

FIG. 4 shows a preformed template overlaid on a piece

of fabric for contouring the fabric and marking for slitting the center portion to insure fitting about the buckle base parts;

FIGS. 5 and 6 are perspective views of the two elements which constitute this improved assembling device for buckles of the style shown in FIGS. 1 and 2;

FIG. 7 is a cross-sectional view of these two elements as they are telescoped in the successive steps of forming a fabric-faced buckle of the style shown in FIGS. 1 and 2;

FIG. 8 is an enlarged, cross-sectional view of the two buckle base parts for use with which this particular adaptation of assembling device has been designed;

FIG. 9 is an exploded, perspective of the two elements between which are successively positioned the piece of fabric and the two base parts, in the axial sequence in which they are used to form the finished buckle;

FIG. 10 is an exploded, perspective of the two elements separated immediately after being used to depress the larger base part into the holding element, overlaid on a piece of fabric;

FIG. 11 is a cross-sectional view of the holding element as shown in FIG. 10;

FIG. 12 is a perspective view of the finished buckle in the holding element of the assembling device;

FIG. 13 is a perspective view of the finished buckle being removed from the holding element;

FIGS. 14 and 15 are perspective views of the front and back, respectively, of a fabric-faced, rectangular-shaped buckle formed with another adaptation of this assembling device;

FIG. 16 is an enlarged, cross-section of the finished buckle shown in FIGS. 14 and 15;

FIG. 17 shows a preformed template overlaid on a piece of fabric for contouring the fabric and marking for slitting the central portions to insure fitting around the buckle base parts;

FIGS. 18 and 19 are perspective views of the two elements which constitute this improved assembling device for buckles of the style shown in FIGS. 14 and 15;

FIG. 20 is a cross-sectional view of these two elements as they are telescoped in the successive steps for forming a fabric-faced buckle of the style shown in FIGS. 14 and 15;

FIG. 21 is an exploded, cross-sectional view of the two buckle base parts for a rectangular-shaped buckle;

FIG. 22 is an exploded perspective of the two elements between which are successively positioned the piece of fabric and the buckle base parts, in the axial sequence in which they are used to form the finished buckle;

FIG. 23 is an exploded perspective of the two elements separated immediately after being used to depress the larger base part into the holding element, overlaid on a piece of fabric;

FIG. 24 is a cross-sectional view of the holding element as shown in FIG. 23;

FIG. 25 is a perspective view of the finished buckle in the holding element of the assembling device;

FIG. 26 is a perspective view of the finished buckle being removed from the holding element; and

FIG. 27 is a perspective view of one type of kit in which a number of base parts 31 and 32, a pair of assembling elements 34 and 35, a template 52 for that particular style of base parts, and sheet of instructions is marketed to be available for the individual professional or do-it-yourself workman to quickly and easily provide him with one or more buckles faced with fabric of his own choosing.

The essential concept of this invention involves a pair of elements each recessed inwardly from one face to form a cavity in one element and a telescoping rim on the other element approximately of the contours, respectively,

of a pair of centrally-open nestable buckle base parts whereby the elements may be repeatedly telescoped first, to depress into the one element one base part overlaid on a piece of fabric and, subsequently, to depress into the one element the other base part to effect its nested positioning of the base parts with the fabric tautened over the face of the one base part and the fabric perimeter interposed between the base parts to secure them in their interlocked relationship.

Two adaptations of this fabric-faced buckle-assembling device are shown, one for assembling circular style buckles and the other for assembling non-circular style buckles. The same reference numerals are used in describing the two adaptations except that primes supplement the numerals for FIGS. 14 to 26. Moreover, it will be understood that the following description of the structure and use of the adaptation shown in FIGS. 1–13 applies equally to the adaptation shown in FIGS. 14–26, by merely reading the numerals with primes, when referring to the latter figures.

A fabric-faced buckle-assembling device designed for use with specially-formed buckle base parts **31** and **32**, embodying the foregoing concept comprises a pair of elements **34** and **35** respectively recessed to form a cavity **36** and a stem **37** respectively conforming to the general contour of the buckle base parts **31** and **32** and adapted for repeated telescopic positioning to successively depress the base parts **31** and **32** into the element **34** on an overlaid piece of fabric **33** so as to tauten the fabric over the face of the base part **31** and interpose the fabric perimeter between the base parts **31** and **32** to secure them in interlocked relationship.

The buckle base parts **31** and **32** as herein shown, for use with which the elements **34** and **35** are specially designed, except for the relative shapes and dimensions, generally simulated buckle base parts that have long been available for the making of fabric-faced buckles, of either the circular or the non-circular styles. Heretofore, however, when made by hand the fabric has had to be adhered to the one base part, similar to the hereinshown part **31**, and the two base parts have been nested with their concave faces opposed and secured in such nested relationship by manual bending over into the inner base part the perimetrical edges of the outer or larger base part.

As is most apparent from FIG. 7 (and FIG. 21) the outer or larger base part **31** is of C-shaped cross-section with the outer flange **38** curved inwardly toward the practically straight opposite flange **39**. As these figures further show, the flange **38** is much higher than the flange **39**. The inner or smaller base part **32** is of slight arcuate cross-section with an inner flat portion **41** and an outer curved portion **42**. The distance between the inner and outer perimeters of the inner arcuate base part **32** is approximately the same as the distance between the opposed inner perimeters of the flanges **38** and **39** of the outer larger base part **31**. So nearly are the aforesaid dimensions the same that the inner base part **32** generally and easily drops into nested position with the outer base part **31**, with no fabric intervening. However when they become so nested the parts **31** and **32** will not separate by merely turning them upside down and shaking them. In fact a very fine pointed instrument, such as a pin, will have to be inserted between the nested parts and the inner part **32** angled to the outer part **31** in order to effect a separation of the parts.

Being so formed the base parts **31** and **32** are adapted for assembly by depressing and snapping the part **32** into the part **31**, with its convex face opposed to the concave face of the part **31**, and with the perimetrical portion of the piece of fabric **33** interposed between the parts **31** and **32**. Thereupon these two parts are locked in such nested relationship by the interposed fabric being drawn over the edges of the flanges **38** and **39** of the part **31** by the outer and inner perimeters of the inner part **32**. (FIGS. 3 and 16.)

The two buckle forms herein shown, are intended to be representative of the two primary styles of buckle in which belt buckles have long been made. One style is circular; the other style is non-circular. Obviously, the circular style can be of almost any desired diameter. The non-circular style, in addition to being of varying dimensions may be practically of any contour. One or both of the base parts **31** and **32** may have cross bars **43** for hinging the usual belt prong (not shown).

The fabric **33**, used for facing a pair of base parts **31** and **32**, may be of almost any character and practically any thickness. The thicker the fabric the more secure will be the locking of the parts in nested relationship. However, in the use of very sheer fabric it may be necessary to use multiple layers of the fabric or an inner layer of other material.

The element **34**, herein referred to as the cup or holding element, is made of an elastic substance so that it may be distorted to permit the insertion of the base part **31** overlaid on fabric **33** of varying thicknesses, and to permit the separation of the finished buckle, as will be explained presently. The element **35**, herein referred to as the pusher element, is made of wood, metal, or possibly plastic.

The cup element **31** is recessed inwardly from one face to form the cavity **36** between a perimetrical rim section **46** and an opposed central section **47**. The shape and contour of the cavity **36** conform substantially to the shape and contour of the base part **31**. In depth, the cavity **36** is about twice the axial thickness of the base part **31**. Oppositely extending ribs **48** and **49** are formed on the opposed walls of the rim section **46** and the central section **47**. These ribs are spaced above the bottom of the cavity **36** a distance just enough more than the axial thickness of the outer base part **31** to permit the latter to be depressed into the cavity with the upper edge of the flange **38** seated under the rib **48** with the fabric **33** interposed. When this assembly device is used with base parts **31** and **32** one of which has a cross bar **43**, the central section **47** of the cup element **34** has a slot **50** crosswise of the section **47** to a depth practically that of the cavity **36**.

The pusher element **35** is recessed inwardly from one face to form the rim **37**, with a rounded edge, dimensioned and contoured substantially the same as the base part **32**, hence it is readily insertable into the cup cavity **36** between the ribs **48** and **49**.

To facilitate the forming of a piece of fabric **33** for proper tautening around the face of the base part **31** and interposing between the base parts **31** and **32**, a template **52** is provided. This is of the shape and size to indicate the approximate size and contour of the piece of fabric **33** most suitable for use with a particular pair of base parts **31** and **32**. Such a template **52** is formed with a series of radiating slots **53** whereby the fabric may be marked for internal slitting to insure the best fitting around and between the base parts **31** and **32**.

The herein shown and described base parts **31** and **32** and the assembling elements **34** and **35** were conceived and constructed to make exceptionally facile fabric-facing of belt buckles by individual, professional or do-it-yourself workmen. To that end one or more of pairs of interfitting base parts **31** and **32** of a particular style, a pair of assembling elements **34** and **35** and a template **52** are marketed in a kit in the form of a small, transparent container **54**. One such a container is referred to in the trade as a "plastic blister." It is secured to a display card **55** for purchase, in stores at notion counters, by mail, by the individuals who desire to make their own fabric-faced buckles.

Upon obtaining such a kit the individual effects the fabric facing of a buckle in the following manner:

(1) The template **52** is laid on the reverse side of the fabric to be used. With a suitable pencil the con-

tour of the template 52 and the slots 53 are marked on the fabric. Thereupon the fabric is cut out on the contour line and slitted along the radial lines, ready for use.

(2) The piece of fabric 33 is placed on the cup element 34, as nearly centrally as possible, and the base part 31 is positioned centrally on the fabric, with the concave side up.

(3) The pusher element 35 is then positioned with the rim 37 seated on the base part 31 between the flanges 38 and 39. Pressure is applied sufficient to force the base part 31 and fabric 33 down into the cavity 36 of the cup element 34 below the ribs 48 and 49. As is most evident from FIG. 11 (FIG. 24) the pressing of the fabric-covered base part 31 below the ribs 48 and 49, because of the friction material of the element 34, tends to tauten the fabric 33 smoothly over the face of the base part 31 and urge the fabric above the flange 38 and 39 inwardly so as to facilitate the next step.

(4) The pusher element 35 is then removed and the perimetrical portion of the fabric is pressed down into the cavity 36 and onto the base part 31.

(5) The base part 32 is then placed on the cup element 34 over the cavity 36 with the concave side up. The pusher element 35 then is positioned with the rim 37 on the base part 32. Pressure is applied to force the base part 32 down into the cavity, against the fabric over the base part 31 until the base part 32 snaps in between and below the flanges 38 and 39 on the base part 31.

(6) After removing the pusher element 35, the cup element 34 is grasped, somewhat as shown in FIG. 13 (or FIG. 26), and twisted to permit a finger or thumb to be inserted under the finished buckle and remove it from the cup element.

As so clearly shown in FIGS. 1, 2, 12, and 13 (FIGS. 14, 15, 25 and 26) the fabric 33 is tautened over the face of the outer base part 31 and the perimetrical portion of the fabric is drawn firmly over the edges of the flanges 48 and 49. Thereupon the base parts 31 and 32 are locked in their nested relationship by the fabric 33 ready to have a belt prong (not shown) fastened to the nested cross bars 43 or 43'. Only by mutilating the finished buckle could the base parts 31 and 32 be separated.

Variations and modifications in the details of structure and arrangement of the parts may be resorted to within the spirit and coverage of the appended claims.

I claim:

1. A device for effecting the interlocking nested assembly of a pair of dished base parts with a piece of fabric to form a fabric-faced product, the device comprising an elastic-material element recessed inwardly from one face to constitute a cavity substantially conforming with the contour of the larger base part, and a rigid pusher element recessed inwardly from one face to constitute a rim substaitially conforming with the contour of the smaller base part, the pusher element being adapted for repeated partial telescopic positioning in the elastic element, first, to depress into the elastic element the larger base part overlaid on the piece of fabric, and subsequently to depress into the elastic element the smaller base part to secure the interlocking nested positioning in the larger base part with the fabric perimeter interposed between the two base parts.

2. A device for effecting the interlocking nested assembly of a pair of dished base parts with a piece of fabric to form a fabric-faced product, the device comprising, an elastic cup recessed inwardly from one face to constitute a cavity between a perimetrical rim section and an opposed central section conforming with the contour of the larger base parts, and a rigid pusher element recessed inwardly from one face to form an axially-disposed rim conforming with the cavity in the cup, the pusher element being adapted for repeated partial telescopic positioning in the cup, first, to depress into the elastic cup the larger base part overlaid on the piece of fabric, and subsequently to depress into the elastic cup the smaller base part to secure its interlocking nested positioning in the larger base part with the fabric perimeter interposed between the two base parts.

3. A device for effecting the interlocking nested assembly of a pair of dished base parts with a piece of fabric to form a fabric-faced product, the device comprising, an elastic cup recessed inwardly from one face to constitute a cavity between a perimetrical rim section and an opposed central section conforming with the contour of the larger base part, an inwardly-extending integral rib on the inner wall of the rim section and spaced from the bottom of the cavity a distance substantially equal to the axial thickness of the larger base part, and a rigid pusher element recessed inwardly from one face to form an axially-disposed rim conforming with the cavity in the cup, the pusher element being adapted for repeated partial telescopic positioning in the cup, first, to depress into the elastic cup the larger base part overlaid on the piece of fabric, and subsequently to depress into the elastic cup the smaller base part to secure its interlocking nested positioning in the larger base part with the fabric perimeter interposed between the two base parts.

4. A device for effecting the interlocking nested assembly of a pair of dished base parts with a piece of fabric to form a fabric-faced product, the device comprising, an elastic cup recessed inwardly from the face to constitute a cavity between a perimetrical rim section and an opposed central section conforming with the contour of the larger base part, a radially-disposed integral rib extending into the cup cavity and spaced from the bottom of the cup cavity a distance substantially equal to the axial thickness of the larger base part, and a rigid pusher element recessed inwardly from one face to form an axially-disposed rim conforming with the cavity in the cup, the pusher element being adapted for repeated partial telescopic positioning in the cup, first, to depress into the elastic cup below the rib the larger base part overlaid on the piece of fabric, and subsequently to depress into the elastic cup the smaller base part to secure its interlocking nested positioning in the larger base part with the fabric perimeter interposed between the two base parts.

5. A device for effecting the interlocking nested assembly of a pair of dished base parts with a piece of fabric to form a fabric-faced product, the device comprising, an elastic cup recessed inwardly from one face to constitute a cavity between a perimetrical rim section and an opposed central section conforming with the contour of the larger base parts, oppositely-extending integral ribs on opposed walls of the rim and central sections and spaced from the bottom of the cup cavity a distance approximately equal to the axial thickness of the larger base part, and a rigid pusher element recessed inwardly from one face to form an axially-disposed rim conforming with the cavity in the cup, the pusher element being adapted for repeated partial telescopic positioning in the cup, first, to depress into the elastic cup below the ribs the larger base part overlaid on the piece of fabric, and subsequently to depress into the elastic cup the smaller base part to secure its interlocking nested positioning in the larger base part with the fabric perimeter disposed between the two base parts.

6. A device for effecting the interlocking nested assembly of a pair of centrally-open dished buckle base parts one with a bar extending across the opening with a piece of fabric to form a fabric-faced buckle, the device comprising an elastic cup recessed inwardly from one face to constitute a cavity between a perimetrical rim section and an opposed central section conforming with

the contour of the larger base part, the central section having a transverse slot for seating the transverse bar on the one base part, and a rigid pusher element recessed inwardly from one face to constitute an axially-disposed rim conforming to the cavity in the cup, the pusher element being adapted for repeated partial telescopic positioning in the cup, first, to depress into the cup the larger base part overlaid on the piece of fabric with the bar seated in the central-section slot to tauten the fabric over the face of the one base part, and subsequently to depress into the cup the smaller base part to secure its interlocking nested positioning in the larger base part with the fabric perimeter interposed between the two base parts.

7. A device for effecting the interlocking nested assembly of a pair of centrally-open base parts with a piece of fabric to form a fabric-faced buckle, one of the base parts being of C-shaped cross-section and the other base part being of slightly arcuate cross-section with the outer and inner diameters of the other base part substantially equal to the respective opposed diameters of the C-shaped base part, the device comprising an elastic cup recessed inwardly from one face to constitute an annular cavity substantially conforming to the one base part, and a rigid pusher element recessed inwardly from one face to constitute an annular rim substantially conforming with the cup cavity, whereby the cup and pusher element are adapted for repeated partial telescopic positioning, first, to depress into the cup the C-shaped base part overlaid on the piece of fabric to tauten the fabric over the face of the base part, and subsequently to depress into the cup the other base part to secure its interlocking nested positioning in the C-shaped base part with the fabric perimeter interposed between the two base parts.

8. A device for effecting the interlocking nested assembly of a pair of centrally-open irregular-contour buckle base parts with a piece of fabric to form a fabric-faced buckle, one of the base parts being of C-shaped cross-section and the other base part being of slightly arcuate cross-section on its outer perimeter, the transverse distance between the outer and inner perimeters of the other base part being substantially the same as the distance between the opposed inner perimeters of the one base part, the device comprising an elastic-material cup recessed inwardly from one face to constitute a cavity between a perimetrical rim section and a central section substantially conforming to the contour of the one base part, and a rigid pusher element recessed inwardly from one face to constitute a rim substantially conforming with the cavity in the cup, whereby the cup and pusher element are adapted for repeated partial telescopic positioning, first, to depress into the cup the one base part overlaid on the piece of fabric to tauten the fabric over the face of the one base part, and subsequently to depress the cup into the other base part to secure its interlocking nested positioning in the one base part with the fabric perimeter interposed between the two base parts.

9. A device for effecting the interlocking nested assembly of a pair of centrally-open irregular-contour buckle base parts with a piece of fabric to form a fabric-faced buckle, one of the base parts being of C-shaped cross-section and the other base part being of slightly arcuate cross-section on its outer perimeter, the transverse distance between the outer and inner perimeters of the other base part being substantially the same as the opposed inner perimeters of the one base part, the device comprising an elastic material cup recessed inwardly from one face to constitute a cavity between a perimetrical rim section and a central section substantially conforming to the contour of the one base part, a radially-disposed integral rib extending into the cup cavity and spaced from the bottom of the cup cavity a distance approximately equal to the axial thickness of the C-shaped base part, and a rigid pusher element recessed inwardly from one face to constitute a rim substantially conforming with the cavity of the cup, whereby cup and pusher element are adapted for repeated partial telescopic positioning, first, to depress into the cup below the rib the one base part overlaid on the piece of fabric to tauten the fabric over the face of the one base part, and subsequently to depress the cup into the other base part to secure its interlocking nested positioning in the one base part with the fabric perimeter interposed between the two base parts.

10. A device for effecting the interlocking nested assembly of a pair of centrally-open dished buckle base parts one with a bar extending across the opening with a piece of fabric to form a fabric-faced buckle, the device comprising an elastic cup recessed inwardly from one face to constitute a cavity between a perimetrical rim section and an opposed central section conforming with the contour of the larger base part, the central section having a transverse slot for seating the transverse bar on the one base part, oppositely-extending integral ribs on opposed walls of the rim and central sections spaced from the bottom of the cup cavity a distance approximately equal to the axial thickness of the one base part, and a rigid pusher element recessed inwardly from one face to constitute an axially-disposed rim conforming to the cavity of the cup, the pusher element being adapted for repeated partial telescopic positioning in the cup, first, to depress into the cup below the ribs the larger base part overlaid on the piece of fabric with the bar seated in the central-section slot to tauten the fabric over the face of the one base part, and subsequently to depress into the cup the smaller base part to secure its interlocking nested positioning in the larger base part with the fabric perimeter interposed between the two base parts.

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