United States Patent [19]

Rieth et al.

[11] **3,844,136**

[45] **Oct. 29, 1974**

[54] **BRACELET COMPONENT INCLUDING FLEXIBLE STRIP COVERED WITH LINK-LIKE SHELLS**

[75] Inventors: **Kurt A. Rieth; Edwin E. R. Hoffmann,** both of Gaspee Plateau, R.I.

[73] Assignee: **Tertron Inc.,** Providence, R.I.

[22] Filed: **Aug. 6, 1973**

[21] Appl. No.: **386,069**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 289,981, Sept. 18, 1972, abandoned.

[52] **U.S. Cl.** ..... **63/4,** 224/4 D

[51] **Int. Cl.** **A44c 5/00**

[58] **Field of Search** ..... 63/2, 4, 5 R, 5 A; 59/79 A; 224/4 D, 4 H; 2/311, 321, 322, 336, 338

[56] **References Cited**

UNITED STATES PATENTS

191,140	5/1877	Hammond et al.	63/11
1,756,101	4/1930	Robidue	63/4
2,871,655	2/1959	O'Larte et al.	63/5 R X

FOREIGN PATENTS OR APPLICATIONS

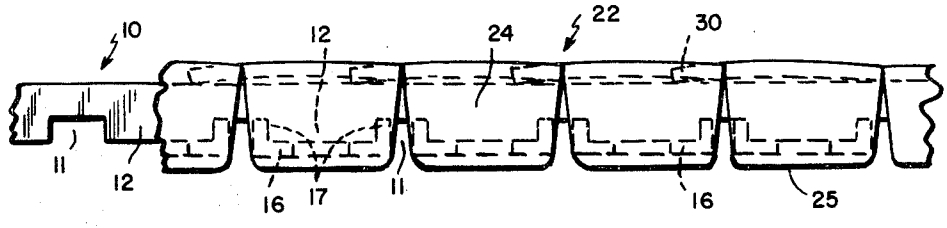
1,253,314	1/1961	France	63/5 R
547,945	9/1956	Italy	63/5 R
566,988	9/1957	Italy	63/4

Primary Examiner—F. Barry Shay

[57] **ABSTRACT**

A non-expansible component for use in making bracelets, including watch bracelets, comprising an elongate strip of transversely flexible plastic material which is flexible transversely of its thickness having a series of substantially parallel grooves extending inwardly from its bottom surface to provide a series of substantially parallel raised elements, the upper surface of the strip being devoid of grooves, a series of bottom shells, each bottom shell having a bottom wall positioned adjacent to the surface of a respective one of said raised elements and substantially parallel side walls positioned adjacent to the sides of said associated one raised element. The component also comprises a series of top shells, one associated with each bottom shell, each top shell having a top wall positioned adjacent to the upper surface of the strip, the top walls having side edges with the side edges of adjacent top shells being adjacent to each other to present a substantially continuous upper surface. Each top shell also has end walls extending from the ends of the top wall adjacent to the sides of the strip, the ends of the respective raised element and thence inwardly adjacent to end portions of the bottom wall of the associated bottom shell and means for directly securing the top shell to the associated bottom shell comprising end walls of the top shell. In a preferred embodiment, the bottom wall of each bottom shell includes a raised central portion and depressed end portions, at least the end portions being in face-to-face relationship with the end portions of the bottom surface of the raised element of the strip with which the bottom shell is associated and the end portions of the end walls of the top shell being in face-to-face relationship with the end portions of the bottom shell, whereby the component is formed with a substantially flat bottom surface provided by the raised central portions of the bottom walls of the series of bottom shells and the end portions of the end walls of the series of top shells.

12 Claims, 16 Drawing Figures



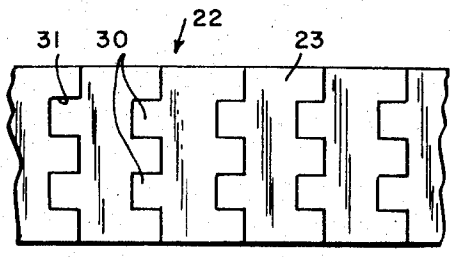


FIG. 1

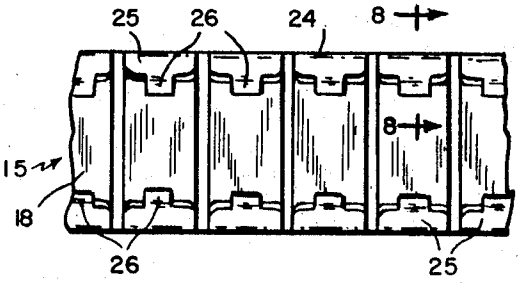


FIG. 2

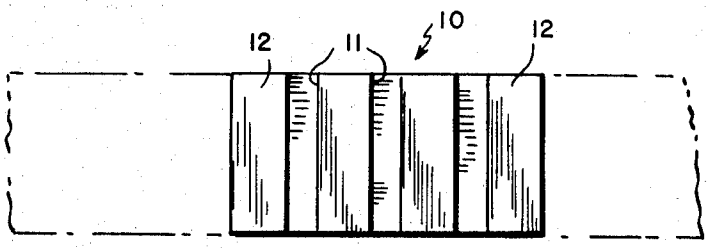


FIG. 3

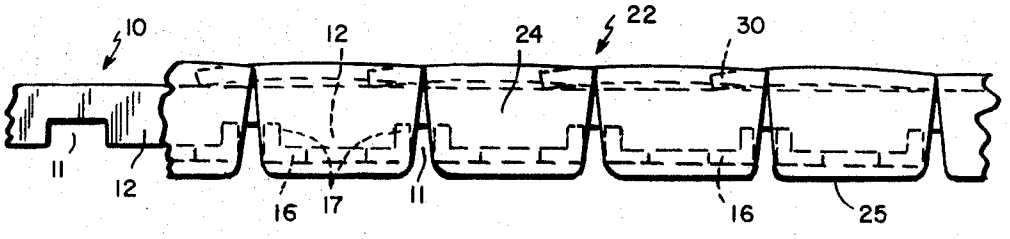


FIG. 4

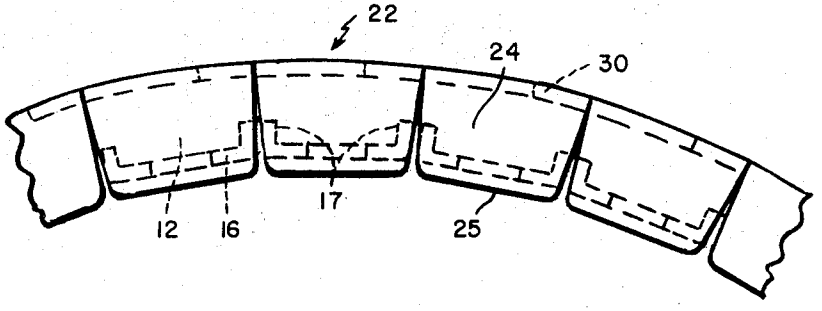


FIG. 5

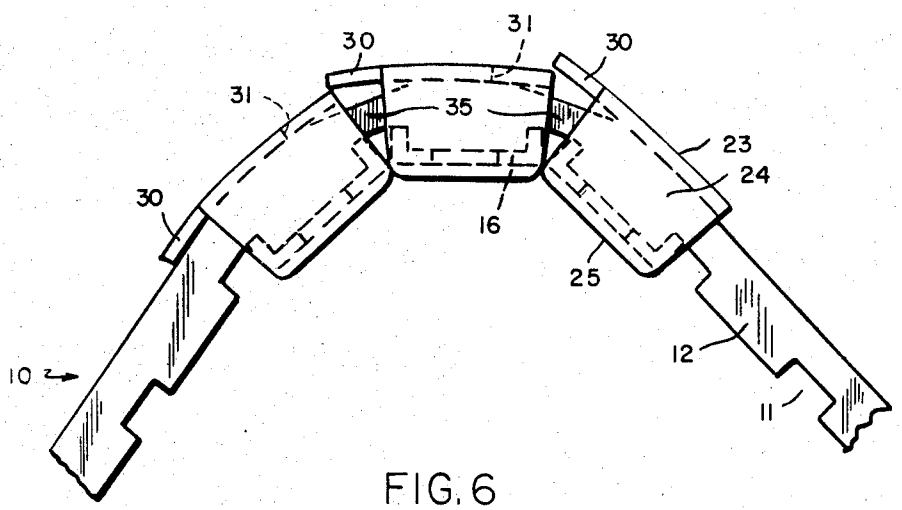
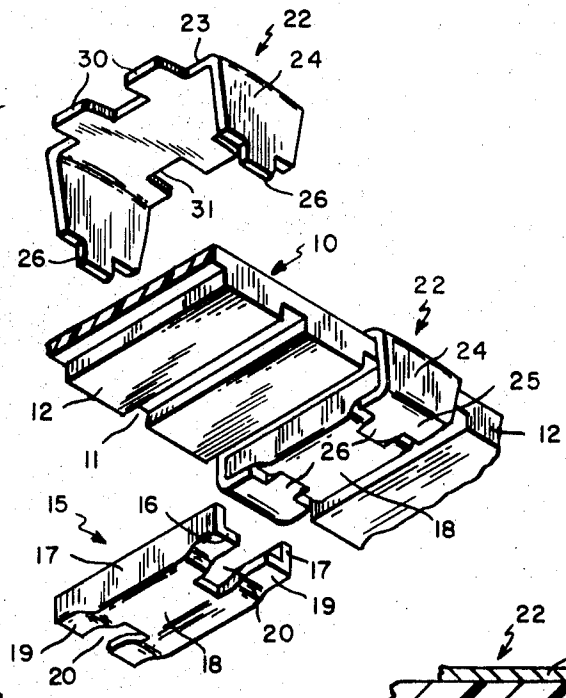


FIG. 6

FIG. 7



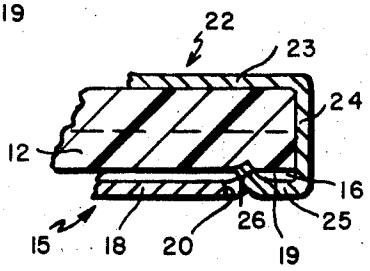
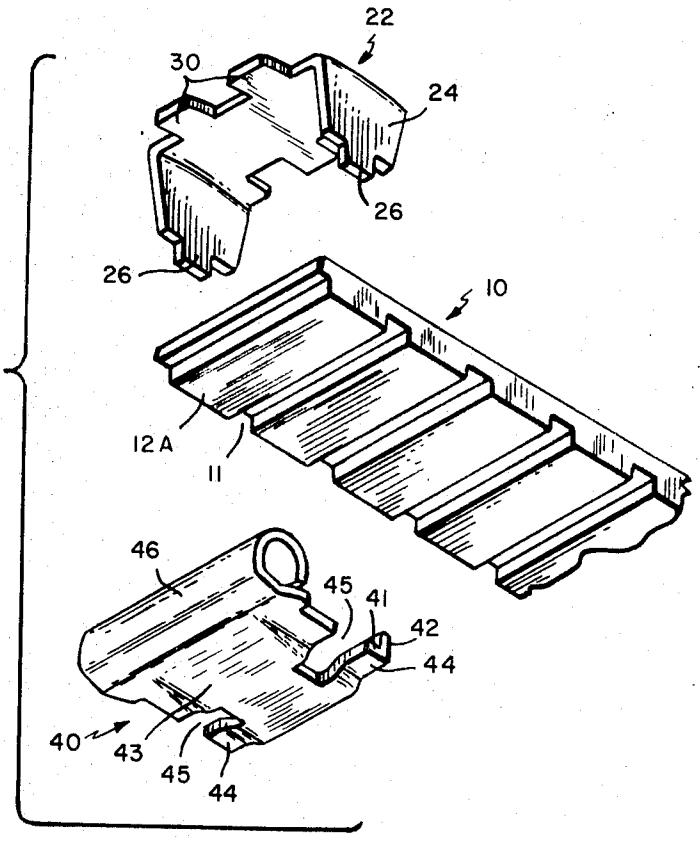


FIG. 8

FIG.9



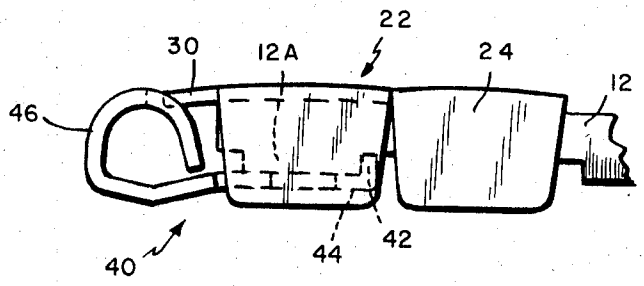


FIG. 10

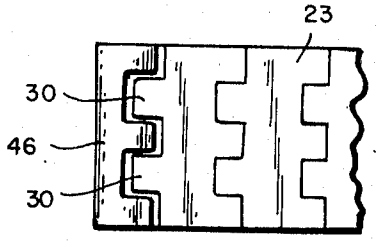


FIG. 11

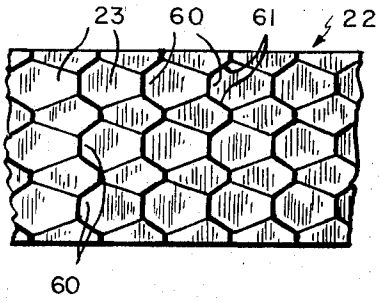


FIG.12

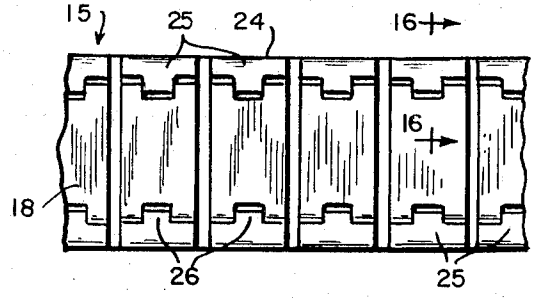


FIG.13

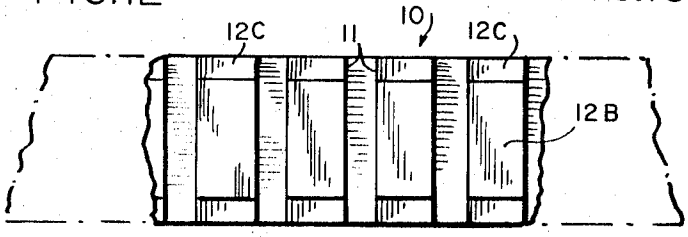


FIG.14

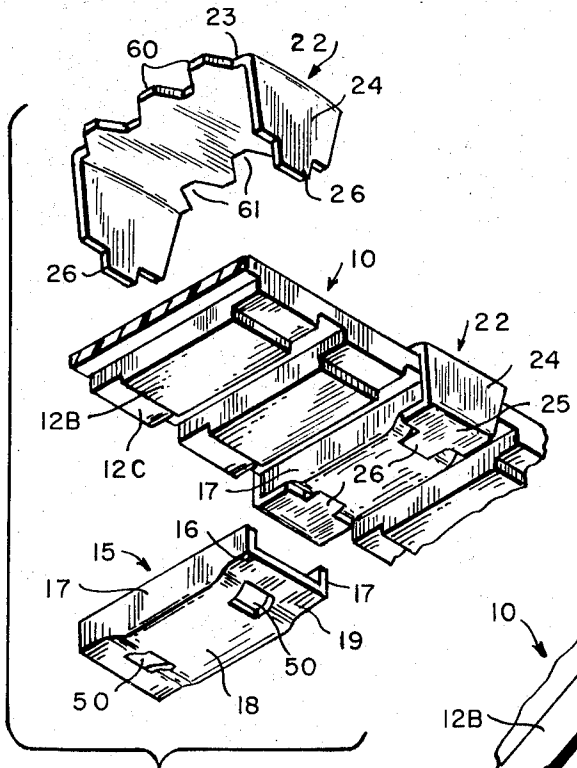


FIG.15

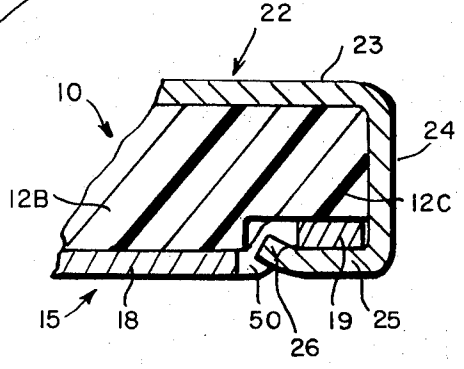


FIG.16

BRACELET COMPONENT INCLUDING FLEXIBLE STRIP COVERED WITH LINK-LIKE SHELLS

This application is a continuation-in-part of our copending application Ser. No. 289,981, filed Sept. 18, 1972, now abandoned.

BACKGROUND OF THE INVENTION

This invention relates to a non-expansible component for use in making bracelets, including watch bracelets. A bracelet may be made by connecting the ends of a relatively long component together. A watch bracelet may be formed from two components by attaching a conventional open-up buckle to buckle connectors provided at their adjacent ends and by providing at their opposite ends conventional end connectors or end hooks for receiving the bails of a wrist watch.

One popular example of a prior art bracelet component is made of metallic mesh but it is very expensive to manufacture and assemble compared to the component of the present invention. For example, welding or soldering is necessary to attach buckle connectors and end connectors to such metallic mesh components. Furthermore, the choices of ornamental appearances of bracelets made of such mesh components are limited.

Suggestions have been made in two Italian Pat. Nos. 547,945 and 566,988 granted Sept. 17, 1956 and Sept. 25, 1957, respectively, each to Giorgia Carlotto, of expansible bracelet components which comprise a molded rubber strip with metal caps. However, the rubber strip of such components is provided with grooves extending inwardly from both the upper and bottom surfaces and the raised portions formed between the grooves connected together by relatively thin strips. In the embodiments of U.S. Pat. No. 566,988, the raised portions between the grooves of the bottom portion of the strip are provided with undercut portions so that said raised portions are shorter and narrower than the raised portions between the grooves of the upper portions of the strip. Furthermore, the means for attaching the metallic top shells to the upper raised portions and for attaching the metallic bottom shells to the bottom raised portions are of such constructions that the necessary operations for assembling the shells to the raised portions of the strip would be much more expensive than the operations necessary to assemble the top and bottom shells to the plastic strip of the present invention. In addition, the bracelets of these Italian patents would be much less durable than bracelets made with components of the present invention because they have grooves extending inwardly from both surfaces, the top and bottom shells are not secured directly to each other and the raised portions are connected together by thin strips.

Swiss Pat. No. 517,700, published Jan. 14, 1972, discloses a watch bracelet which consists of a single arch-shaped strip of nylon or polyvinyl chloride provided with parallel grooves extending inwardly from its upper surface. The bottom surface of the strip is fluted to prevent the bracelet from sliding around the arm of the wearer. Spaced notches are provided in the side walls of the strip. Decorative pieces, which may be made of plastic, are applied to the strip and their upper surfaces are coextensive with the upper surfaces of the raised elements of the strip which are formed between the grooves. These pieces have end walls which extend downwardly from their top walls adjacent to the side wall of the strip and these end walls have projections which protrude inwardly into the spaced notches in the side walls of the strip to secure the decorative pieces to the strip. There are gaps between the side edges of adjacent decorative pieces through which the plastic strip is visible and consequently the pieces do not present a substantially continuous upper surface for the bracelet. No bottom shells are provided to substantially conceal the bottom surface of the plastic strip from view. The appearance of a bracelet made of components of the present invention is much more attractive than the bracelet shown in the Swiss patent because gaps are not visible between the adjacent side edges of the decorative top shells either when the bracelet is flat or when it encircles the wearer's wrist and also because the bottom shells substantially conceal the bottom side of the plastic strip from view. A bracelet made of components of this invention is also more durable than the bracelet shown in the Swiss patent because the present invention embodies top shells and bottom shells with the top shells directly secured together in pairs to prevent accidental separation of them from the plastic strip.

French U.S. Pat. No. 1,253,314 dated Jan. 2, 1961 discloses an expansible watch bracelet consisting of two components made of flat spiral coiled springs connected together by a stop device which includes tabs which project inwardly between pairs of coils at the adjacent ends of the components to hold them together. There are two elongate plastic strips which extend through the respective components and the stop device and are slidable longitudinally within them when the components are stretched and extended. The ornamental appearance of the bracelet of the present invention is much more attractive than that of the bracelet shown in the French patent, the bracelet of the French patent cannot be provided with a plurality of selected ornamental appearances by varying the designs of the top shells and the bracelet of the French patent does not comprise a series of top and bottom shells positioned adjacent to the upper surface, the sides and the bottom surface of a plastic strip and with the side edges of the top shells adjacent to each other to present a substantially continuous upper surface both when the bracelet is flat and when it encircles the wrist of the wearer. A bracelet made of components of the present invention also has gaps or spaces between the side walls of adjacent bottom shells to minimize hair pinching or pulling whereas the bracelet of the French patent would pinch or pull the hairs of the wearer in use.

To the best of our knowledge, the products shown and described in the above identified Italian, Swiss and French patents have not been sold in the United States nor met with commercial acceptance in the United States.

One object of this invention is to provide a non-expansible component for use in making bracelets which has a more attractive appearance than bracelets or components of said prior art patents.

Another object is to provide such a component which is economical to manufacture and assemble.

A further object is to provide such a component which is flexible transversely of its thickness and durable.

Another object is to provide such a component in which there is a substantial latitude in choices of the design of the top walls of the top shells.

Yet another object is to provide such a component in which the bottom surface of the component is substantially flat so that a bracelet embodying one or more components will not be uncomfortable in use.

A still further object is to provide such a component in which the combined top and bottom shells are directly secured to each other in pairs and thus securely fastened about the plastic strip, enhancing the durability of the component in use.

A further object is to provide such a component in which spaces are provided at the lower portion of the component to minimize hair pinching or pulling when a bracelet embodying them is used.

Yet another object is to provide such a component in which buckle connectors and end connectors may be attached to its ends without welding or soldering.

A still further object is to provide such a component in which the plastic strip is substantially concealed from view by the top and bottom shells.

Another object is to provide a novel, non-expansible component for use in making bracelets.

Other objects and advantages of the invention will be apparent to persons skilled in the art from the following description.

In general, the component comprises an elongated strip of plastic material which is flexible transversely of its thickness having a series of substantially parallel grooves extending inwardly from its bottom surface to provide a series of substantially parallel raised elements between the grooves. The upper surface of the strip is devoid of grooves. The strip may be made of any suitable plastic material such as polyurethane based materials, rubber and the like, to provide a strip which is flexible transversely of its thickness, relatively hard and has suitable resistance to chemicals and solvents which are normally encountered in the use of bracelets.

The component also comprises a series of bottom shells which may be made of metal. Each bottom shell has a bottom wall positioned adjacent to the bottom surface of one of the raised elements and a pair of substantially parallel side walls positioned adjacent to the wide walls of this raised element. The bottom wall comprises a raised central portion and depressed end portions. The bottom wall of each bottom shell also comprises a pair of spaced openings one near one end of the wall and the other near the other end and these openings may be either rectangular apertures, or slots which extend inwardly from the ends of the bottom shell.

The component also comprises a series of ornamental top shells which may be made of metal. Each top shell has a top wall positioned adjacent to the upper surface of the plastic strip and the side edges of adjacent top shells are adjacent to each other to present a substantially continuous upper surface. Each top shell also has end walls which extend from the ends of the top wall adjacent to the sides of the plastic strip. The end walls have end portions which are in face-to-face relationship with the end portions of the bottom shell and these end portions of the end walls are provided with centrally disposed tabs which are rolled or bent into said openings of the bottom wall of the bottom shell. Thus, each pair of top and bottom shells are directly secured to each other and securely fastened about the plastic strip enhancing the durability of the component in use. In a preferred embodiment, the ends of the tabs extend into the adjacent plastic materials of the associated raised element of the plastic strip but this is not necessary.

Each pair of side walls of each bottom shell are closely adjacent to the side walls of the respective raised element with which it is associated and thus each bottom shell is positively located with respect to its associated raised element and this eliminates uneven spacing of the combined bottom and top shells in the finished component.

Accordingly, the series of combined top and bottom shells are securely attached to the plastic strip, the bracelet component is formed with a substantially flat bottom surface which is provided by the central portions of the bottom shells, and the end portions of the end walls of the top shells, and the strip of plastic material is substantially concealed from view by the series of top and bottom shells.

The sides of the end walls of the top shell converge as they extend downwardly from its top wall and the bottom shells are narrower than the top walls of the top shells. This provides gaps or spaces at the lower portion of the assembled component. These spaces minimize hair pinching or pulling and permit normal flexure of a bracelet made of such components around the wrist with no gaps or spaces appearing between the top shells when viewed from the top.

A buckle connector may be substituted for the bottom shell at one end of a component and thus secured to the plastic strip by a top shell without soldering or welding the buckle connector to any element of the component.

An end connector may be substituted for the top shell at the other end of a component and secured to the plastic strip by a bottom shell without soldering or welding the end connector to any elements of the component.

A plurality of spaced extensions are provided on one side edge of the top wall of each top shell and they extend into a plurality of openings formed in the adjacent side edge of the top wall of the adjacent top shell to provide an attractive appearance for the outer face of the component. However, such extensions and openings are not necessary to the functioning of the invention in its broadest aspect. Other attractive appearances may be provided by impressing any desired ornamental designs on the upper surfaces of top shells which are like the top shells shown in the drawings or on top shells which are of rectangular or other configurations when viewed from the top.

A bracelet made of one or more components embodying this invention is comfortable in use, durable, economical to manufacture and assemble, has an attractive appearance, may be provided with numerous ornamental designs and fulfills the objects stated above. Other objects and advantages will be apparent to perons skilled in the art from the following specification read in conjunction with the drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings:

FIG. 1 is a fragmental top plan view of a section of a component embodying the invention;

FIG. 2 is a fragmental bottom plan view of the parts shown in FIG. 1;

FIG. 3 is a fragmental bottom plan view of the elongate strip of plastic material which is one of the elements of the components;

FIG. 4 is a fragmental enlarged view in side elevation of the component in a flat position;

FIG. 5 is a fragmental enlarged view in side elevation of the component flexed transversely of its thickness to the extent it appears when a bracelet embodying two components is in position about the wrist of the wearer.

FIG. 6 is a fragmental enlarged view in side elevation of the component which is flexed transversely of its thickness to a relatively great extent;

FIG. 7 is a fragmental exploded view showing parts of the component unassembled at the left and assembled at the right;

FIG. 8 is a section taken on the line 8—8 of FIG. 2;

FIG. 9 is a fragmental exploded view showing one end of the plastic strip, and a top shell and buckle connector in unassembled positions;

FIG. 10 is a view in side elevation of the parts shown in FIG. 9 and a top and bottom shell in assembled positions;

FIG. 11 is a top plan view on a reduced scale of the elements shown in FIG. 10;

FIG. 12 is a fragmental top plan view of another embodiment of a component embodying the invention;

FIG. 13 is a fragmental bottom plan view of the parts shown in FIG. 12;

FIG. 14 is a fragmental bottom plan view of the elongate strip of plastic material which is one of the elements of the component shown in FIGS. 12 and 13;

FIG. 15 is a fragmental exploded view showing parts of the component of FIGS. 12, 13 and 14 unassembled at the left and assembled at the right; and

FIG. 16 is an enlarged section taken on the line 16-16 of FIG. 13.

DESCRIPTION OF THE EMBODIMENT SHOWN IN FIGS. 1 THROUGH 11 OF THE DRAWINGS

The component shown in the drawings comprises an elongate strip of plastic material 10 which is flexible transversely of its thickness having a series of substantially parallel grooves 11 extending inwardly from its bottom surface to provide a series of substantially parallel raised elements 12 between the grooves. This strip may be made of any suitable plastic material such as polyurethane based materials, rubber and the like to provide a strip which is flexible transversely of its thickness, hard and has good resistance to chlorinated solvents, alcohol, kerosine, oil, grease, household detergents, dilute acids and alkalis (perspiration).

It has been found that a polyurethane polymer material having the following properties is suitable:

Durometer range of from about 50 to about 55 Shore D scale measured by any suitable durometer tester;

Tensile strength of about 4,000 psi measured on an Instrom tensile tester;

Elongation of about 300 percent measured on an Instrom tensile tester at ambient temperature;

Good hydrolytic stability;

Good abrasion and tear resistance.

Except as otherwise stated, the operating range should be from 0° F. to about 200° F. for determination of the above properties.

The component also comprises a series of bottom shells 15, FIG. 7, each bottom shell having a bottom wall 16 positioned adjacent to the surface of one of the raised elements 12 (FIG. 8) and a pair of substantially parallel side walls 17 positioned adjacent to the side walls of this raised element. The bottom wall comprises a raised central portion 18 and depressed end portions 19. At least the end portions 19 are in face-to-face relationship with the ends of the end portions of the raised element 12 as shown in FIG. 8. The bottom wall of each bottom shell is provided with openings or slots 20 for a purpose to be described below. The bottom shells may be made of metal such as stainless steel.

In the embodiment shown in these figures of the drawings, there is a space between the raised central portion of the bottom shell and the central portion of the raised element 12 as shown in FIG. 8 but, if desired, this space may be eliminated by providing a raised portion of the central portion of each raised element 12 as shown in FIGS. 14, 15 and 16 of the drawings.

The component also comprises a series of ornamental top shells 22 which may be made of metal such as stainless steel or gold-filled materials. Each top shell has a top wall 23 positioned adjacent to the upper surface of the plastic strip 10 as shown in FIG. 8. It also comprises end walls 24 which extend from the ends of the top wall 23 adjacent to the sides of the plastic strip 10, having end portions 25 which are in face-to-face relationship with the end portions 19 of the bottom shell. It also comprises centrally disposed tabs 26 on the end portions 25 which are rolled or bent into the openings 20. While in the preferred embodiment, the ends of the tabs extend into the adjacent plastic material of the associated raised element 12 of the plastic strip as shown in FIG. 8, this is not necessary.

Each pair of side walls 17 of each bottom shell are closely adjacent to the side walls of the raised element 12 with which it is associated and consequently each bottom shell is positively located with respect to its associated raised element and this eliminates uneven spacing of the combined bottom and top shells in the finished component.

Thus, each pair of top and bottom shells are directly secured together and the series of combined top and bottom shells are secured about the plastic strip, the bracelet component is formed with a substantially flat bottom surface which is provided by the central portions 18 of the bottom shells and the end portions 25 of the end walls of the top shells and the strip of plastic material is substantially concealed from view by the series of top and bottom shells.

A watch bracelet may be formed from two components by attaching a conventional open-up buckle (not shown) to buckle connectors 40 provided at their adjacent ends and by providing at their opposite ends conventional end connectors (not shown) for receiving the bails of a wrist watch.

As shown in FIGS. 9, 10 and 11, a buckle connector 40 has a bottom wall 41 positioned adjacent to the surface of the end raised element 12A and a side wall 42 positioned adjacent to the adjacent side wall of this raised element. The bottom wall comprises a central portion 43 and end portions 44 which are in face-to-face relationship with the end portions of the bottom wall of the raised element 12A. The end portions 44 are provided with slots 45 to receive the tabs 26 of the ends 24 of the top shell 22.

The top shell 22 is of the same construction as the top shells 22 shown in the other views of the drawings and it is assembled with the buckle connector and the plas-

tic strip 10 in the same manner as with the bottom shells 15 shown in the other views of the drawings.

One end of the buckle connector 40 is provided with a loop 46 which receives a spring bar (not shown) to attach the buckle connector to an end of an open up buckle (not shown) as is well known in the art.

Thus, no soldering or welding is necessary to attach the buckle connector to the attachment.

Similarly, an end connector (not shown) for connecting the component to a wrist watch may be attached to an end of a component by substituting an end connector element for the top shell at that end of the component. The end connector is exactly like the top shell 22 except that a loop is substituted at one side for the extensions 30, the loop being similar to the loop 46 except that its free end faces downwardly rather than upwardly. The function of the loop is to receive a spring bar which is associated with the lugs of the wrist watch.

Such an end connector is assembled to the associated underlying bottom shell by rolling its tabs 26 into the openings or slots 20 of the bottom shell and consequently no soldering or welding is necessary.

A bracelet may be provided by connecting the ends of one longer component together by a suitable connecting member.

The extensions 30 (FIGS. 1 and 7) formed on one side of the edges of the top wall of each top shell extend into the openings 31 formed in the side edge of the top wall of the adjacent top shell to provide an attractive appearance for the outer face of the component. However, such extensions and openings are not necessary for the functioning of the component. Other attractive appearances may be provided by impressing any desired ornamental designs on the upper surfaces of the top shells shown in the drawings or on top shells which are of rectangular or other configurations when viewed from the top.

The component is shown in a flat position in FIG. 4, in a position flexed transversely of its thickness in FIG. 5 similar to a position it assumes when encircling the wrist of a wearer and in FIG. 6, it is shown flexed transversely of its thickness to a relatively great extent. In FIG. 6, while the portions 35 of the plastic strip are flexed transversely to the thickness of the strip to a relatively great extent, the component is not damaged due to the fact that the strip is made of a suitable material which is flexible transversely of its thickness.

As shown in FIGS. 4 and 5, the sides of the end walls 24 of each top shell converge as they extend downwardly from its top wall and the bottom shells are narrower than the top walls of the top shells. This provides gaps or spaces at the lower portion of the assembled component. These spaces permit normal flexure of a bracelet around the wrist while minimizing or eliminating hair pinching or pulling. Furthermore, no gaps or spaces appear between the top shells when viewed from the top as in FIG. 1.

DESCRIPTION OF THE EMBODIMENT SHOWN IN FIGS. 12 THROUGH 16 OF THE DRAWINGS

The component shown in these figures of the drawings also comprises an elongate strip of transversely flexible plastic material 10, having a series of substantially parallel grooves 11 extending inwardly from its bottom surface to provide a series of substantially parallel raised elements between the grooves. This strip may be made of any suitable plastic material as described above.

In this embodiment, each raised element includes a thicker central portion 12B and thinner end portions 12C.

The component also comprises a series of bottom shells 15, FIGS. 13, 15 and 16, each bottom shell having a bottom wall having a raised central portion 18 positioned adjacent to the surface of the thicker central portion 12B of one of the raised elements and depressed end portions 19 positioned adjacent to the thinner end portions 12C (FIG. 16). The bottom wall also comprises a pair of substantially parallel side walls 17 positioned adjacent to the side walls of the raised element with which the bottom shell is associated. The bottom wall of the bottom shell is provided with substantially rectangular openings 50 which are spaced inwardly from its ends as shown in FIGS. 15 and 16. The bottom shells may be made of metal such as stainless steel.

The component also comprises a series of ornamental top shells 22 which may be made of metal such as stainless steel or gold-filled materials. Each top shell has a top wall 23 positioned adjacent to the upper surface of the plastic strip 10 as shown in FIG. 16. It also comprises end walls 24 which extend from the ends of the top wall 23 adjacent to the sides of the plastic strip 10, having end portions 25 which are in face-to-face relationship with the end portions 19 of the bottom shell. It also comprises centrally disposed tabs 26 on the end portions 25 which are rolled or bent into the openings 50. The ends of the tabs 26 may extend into the adjacent plastic material of the associated raised element 12B or 12C of the plastic strip but this is not necessary.

Each pair of side walls 17 of each bottom shell are closely adjacent to the side walls of the raised element 12B, 12C with which it is associated and consequently each bottom shell is positively located with respect to its associated raised element and this eliminates uneven spacing of the combined bottom and top shells in the finished component.

Thus, each top shell is directly secured to its associated bottom shell and each pair of combined top and bottom shells are fastened about the plastic strip, the bracelet component is formed with a substantially flat bottom surface which is provided by the central portions 18 of the bottom shells and the end portions 25 of the end walls of the top shells and the strip of plastic material is substantially concealed from view by the series of top and bottom shells.

Extensions 60 (FIGS. 12 and 15) are provided on one side of the top shells and they extend into openings or slots 61 formed in one side of the adjacent top shell to provide an attractive appearance for the outer face of the component. The side edges of adjacent top shells are adjacent to each other to present a substantially continuous upper surface when the component is flat as shown in FIG. 12 and when it is flexed about the wearer's wrist as shown in FIG. 5.

The end walls 24 of each top shell converge as they extend downwardly from its top wall and the bottom shells are narrower than the top walls of the top shells. This provides gaps or spaces at the lower portion of the assembled component as best shown in FIGS. 4 and 5. These spaces permit normal flexure of a bracelet around the wrist while minimizing or eliminating hair pinching or pulling.

An open-up buckle, buckle connectors and end connectors may be provided as described above with respect to the embodiment of FIGS. 1 to 11.

A bracelet made of one or more components embodying this invention is comfortable in use, durable, economical to manufacture and assemble, has an attractive appearance, may be provided with numerous ornamental designs and fulfills the objects described above.

While two desirable embodiments of the invention have been shown in the drawings, it is to be understood that this disclosure is for the purpose of illustration only and that various changes in shape, proportion and arrangement of parts as well as the substitution of equivalent elements for those herein shown and described may be made without departing from the spirit and scope of the invention as set forth in the appended claims.

We claim:

1. A component for use in making a bracelet comprising

an elongate strip of plastic material which is flexible transversely of its thickness having a series of substantially parallel grooves extending transversely of and inwardly from its bottom surface to provide a series of substantially parallel raised elements between said grooves, the upper surface of said strip being substantially flat and devoid of grooves,

a series of bottom shells, each bottom shell having a bottom wall positioned adjacent to the surface of a respective one of said raised elements and substantially parallel side walls positioned adjacent to the sides of said associated one raised element,

a series of top shells one associated with each said bottom shell, each top shell having a top wall positioned adjacent to said upper surface of said strip, said top walls having side edges with the side edges of adjacent ones of the top shells being adjacent to each other to present a substantially continuous upper surface, said top shell also having end walls extending from the ends of said top wall adjacent to the sides of said strip, the ends of the respective raised element and thence inwardly adjacent to end portions of said bottom wall of said associated bottom shell, and means for directly securing said top shell to the associated bottom shell, said means comprising said end walls of the top shell,

whereby said series of top and bottom shells are secured together in pairs, said strip of plastic material is substantially concealed from view by said series of top and bottom shells and the bracelet component is flexible transversely of its thickness.

2. A component according to claim 1 wherein said means for securing comprises a pair of tabs, one extending from one of said end walls of the top shell and the other extending from the other of said end walls.

3. A component according to claim 1 wherein the bottom wall of each bottom shell comprises a raised central portion and depressed end portions, at least said end portions of the bottom shell being in face-to-face relationship with the end portions of one surface of a respective one of said raised elements, and end portions of the end walls of said top shell being in face-to-face relationship with end portions of said bottom shell, whereby said component is formed with a substantially flat bottom surface provided by the central portions of the bottom walls of the series of bottom shells and the end portions of the end walls of the series of top shells.

4. A component according to claim 3 wherein the bottom wall of each bottom shell comprises a pair of spaced openings, one near one end of the bottom wall and the other near the other end of the bottom wall.

5. A component according to claim 4 wherein each of said openings is a substantially rectangular aperture.

6. A component according to claim 4 wherein each of said openings is a slot which extends inwardly from the end of the respective end portion of the bottom shell.

7. A component according to claim 4 wherein said means for securing comprises a pair of tabs, one tab extending from the end portion of one of said end walls into one of said openings and the other tab extending from the end portion of the other end wall into the other of said openings.

8. A component according to claim 7 wherein the ends of said tabs extend through said openings and into the plastic material of a respective one of said raised elements.

9. A component according to claim 1 wherein the sides of the end walls of said top shell converge as they extend downwardly from its top wall to the associated bottom wall of the bottom shell and the bottom shell is narrower than the top wall of the top shell, whereby spaces are provided between adjacent ones of the assembled top and bottom shells at the lower portion of the assembled component.

10. A component according to claim 1 which also comprises a buckle connector at one end of the component, said connector comprising a bottom wall positioned adjacent to the surface of one of said raised elements, a side wall positioned adjacent to one side of one of said raised elements and a loop for receiving an element of a buckle at the side of said connector bottom wall opposite to said connector side wall.

11. A component according to claim 1 which also comprises an end connector at one end of the component, said connector comprising a top wall positioned adjacent to said upper surface of said strip and end walls extending from the ends of said top wall adjacent to the sides of said strip, the ends of one said raised element and thence inwardly adjacent to end portions of the bottom wall of a bottom shell associated with said end connector, means for securing said end walls of the end connector to the associated bottom shell and a loop for receiving a spring bar at one side of said connector top wall.

12. A component according to claim 1 wherein one side edge of the top wall of each top shell comprises a plurality of spaced openings extending inwardly from said side edge and the opposite side edge is provided with a plurality of spaced extensions of substantially the same size as said openings, said extensions of said one side edge of the top wall extending into the openings of the side edge of the adjacent top wall of the assembled component to provide an attractive appearance.

* * * * *

65