

[54] BRACELET CONSTRUCTION

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[58] Field of Search 59/80, 82, 78, 90; 63/4; 224/4 B, 4 D, 4 H

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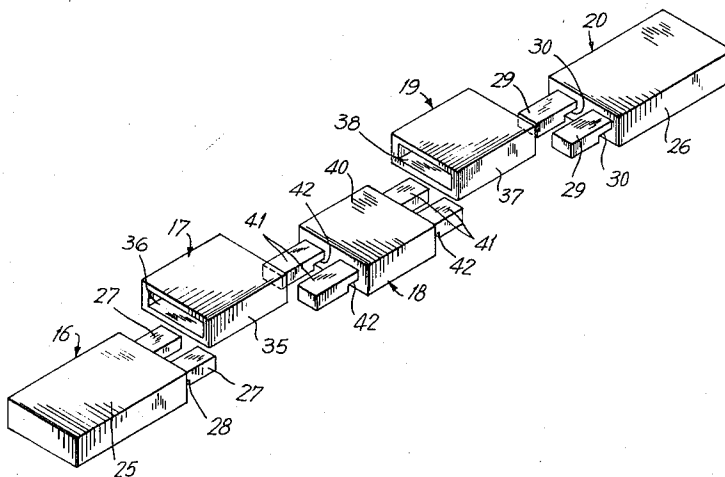
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[57]

ABSTRACT

A bracelet construction of the tile type linkage wherein a plurality of elements are arranged in contiguous rows, the elements of proximate rows being offset or staggered, so that each element overlaps two elements of a contiguous row, and interfitting formations on the elements serving to interconnect all the elements and permit of relative element movement for flexibility of the bracelet.

9 Claims, 11 Drawing Figures



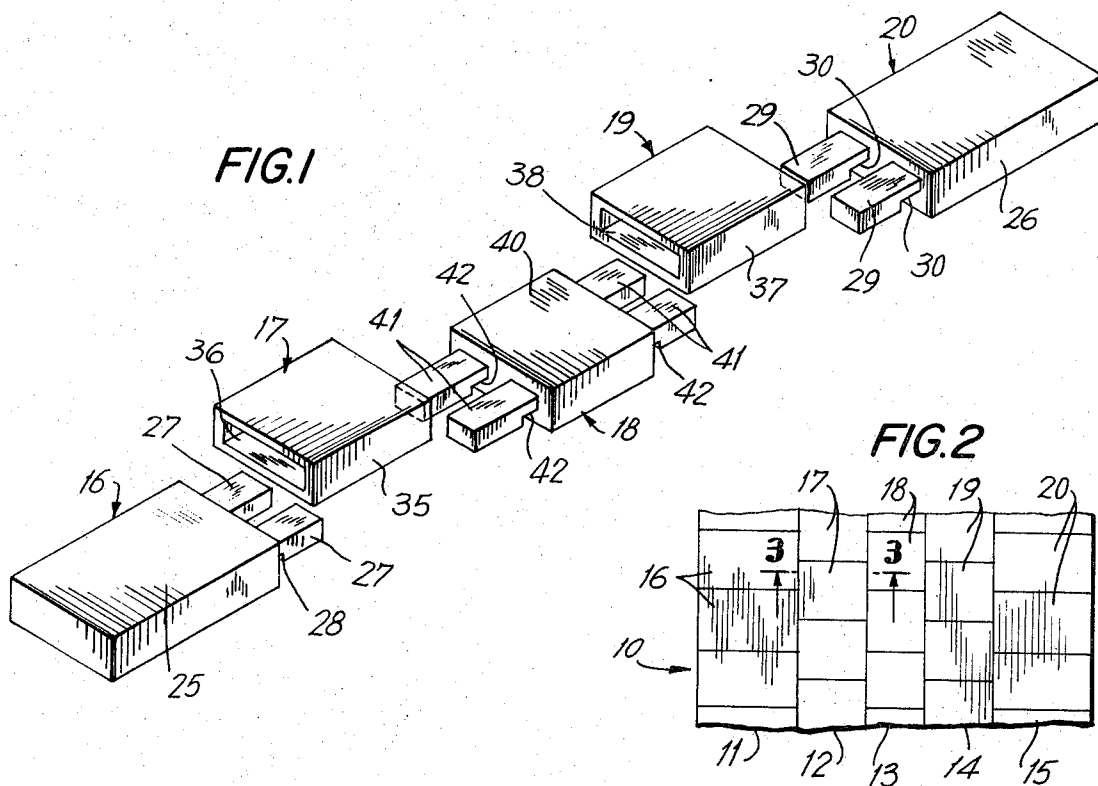
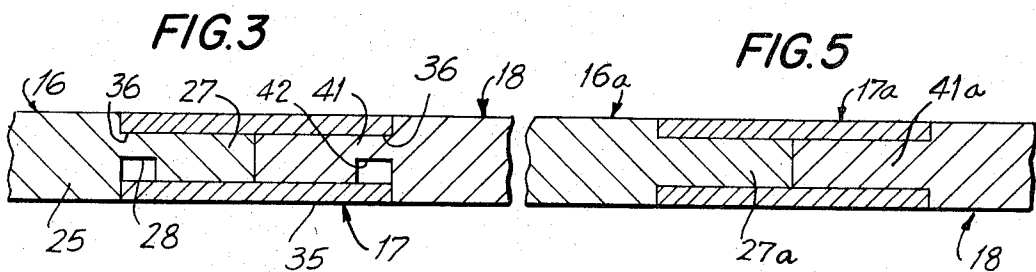
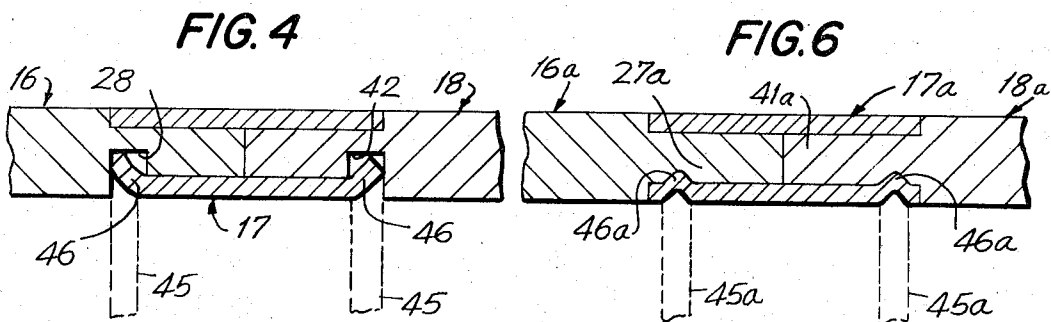


FIG. 7

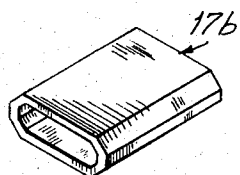


FIG. 8

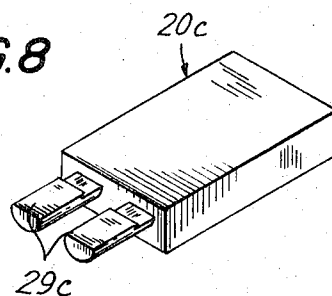


FIG. 9

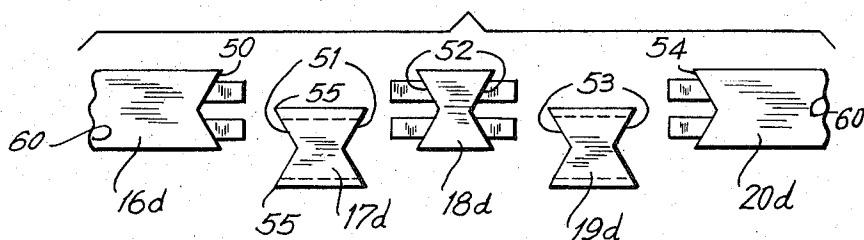


FIG. 10

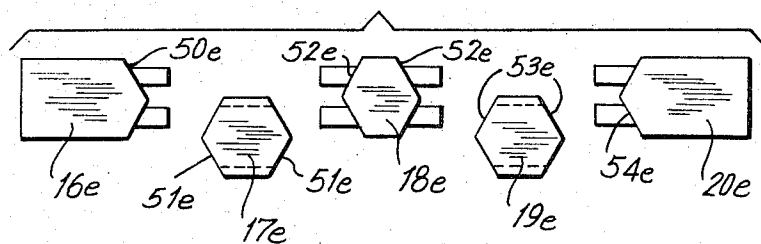
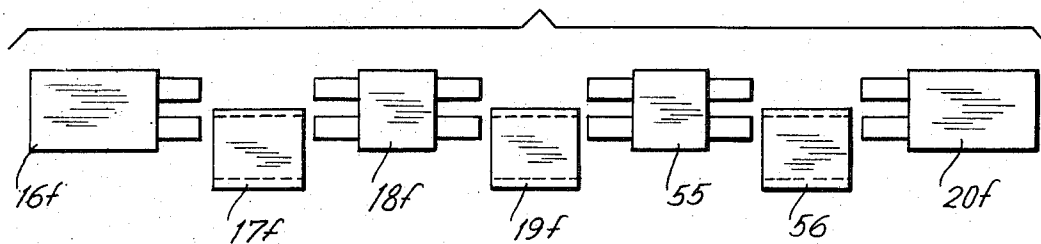


FIG. 11



BRACELET CONSTRUCTION

BACKGROUND OF THE INVENTION

As is well known to those versed in the art, prior bracelet constructions, such as of the tile type bands or bracelets, as for watchbands, and the like, have been relatively limited in design configurations, and have generally required tedious selection and assembly procedures to achieve other than uniform design configuration.

SUMMARY OF THE INVENTION

It is, therefore, an important object of the present invention to provide a uniquely advantageous bracelet construction of the tile type which is readily adapted for manufacture, and is capable of convenient fabrication in a wide variety of design configurations at minimal expense. It is also an object of the invention to provide a bracelet construction which is further adapted for cutting, or shaping — particularly the end edge elements —, stamping or other appropriate working after assembly in order to produce many selected variations in configuration, such as a bracelet with scalloped or tapered edges without having the need to change any elements thereof, and which otherwise overcomes the above-mentioned difficulties of the prior art.

It is still another object of the present invention to provide a bracelet construction having the advantageous characteristics mentioned in the preceding paragraph, which is extremely simple in structure, durable and reliable throughout a long useful life, and which is capable of economic manufacture and assembly to effect substantial savings in cost.

Other objects of the present invention will become apparent upon reading the following specification and referring to the accompanying drawings, which form a material part of this disclosure.

The invention accordingly consists in the features of construction, combinations of elements, and arrangements of parts, which will be exemplified in the construction hereinafter described, and of which the scope will be indicated by the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is an exploded perspective view showing component parts of a bracelet constructed in accordance with the teachings of the present invention.

FIG. 2 is a partial plan view of a tile type bracelet of the instant invention.

FIG. 3 is a partial transverse sectional view taken along the line 3—3 of FIG. 2, prior to final assembly.

FIG. 4 is a sectional view similar to FIG. 3, but showing the final assembly procedure.

FIG. 5 is a partial sectional view similar to FIG. 3, but showing a slightly modified embodiment prior to final assembly.

FIG. 6 is a sectional view similar to FIG. 5 illustrating the final assembly procedure.

FIG. 7 is a perspective view showing a slightly modified form of component part of the instant invention.

FIG. 8 is a perspective view showing another slightly modified form of component part.

FIG. 9 is an exploded plan view showing further modification of component parts in accordance with the instant invention.

FIG. 10 is an exploded plan view similar to FIG. 9, showing a further modification.

FIG. 11 is an exploded plan view similar to FIGS. 9 and 10, showing still another modification in accordance with the teachings of the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now more particularly to the drawings, and specifically to FIGS. 1-4 thereof, a bracelet is shown in FIG. 2, there generally designated 10, and includes a plurality of bracelet elements or component parts arranged in longitudinally extending rows 11, 12, 13, 14 and 15. That is, the row 11 is composed of a plurality of elements 16, while the row 12 is composed of a plurality of elements 17, the row 13 being composed of a plurality of elements 18, the row 14 being composed of a plurality of elements 19, and the row 15 being composed of a plurality of elements 20. The elements of each row may be essentially identical to each other. Further, the element 16 and 20 of respective outer rows 11 and 15 may be essentially identical to each other, as are the elements 17 and 19 of rows 12 and 14, respectively adjacent to outer rows 11 and 15. The intermediate row 13 may have its elements 18 similar in certain respects to the outer rows 11 and 15, as will appear more fully hereinafter. Thus, it may be stated that alternate rows may have their elements identical or similar, for simplicity and economy in manufacture and assembly. While the illustrated embodiment of bracelet 10 shown in FIG. 2 includes five rows of elements, it is appreciated that the number of rows may be greater or less, being at least three, and advantageously of an odd number.

It will also appear in the plan view of FIG. 2 that the elements of each row are in contiguous relation with respect to each other, while the elements of contiguous rows are in proximate relation with each other. Further, the elements of contiguous rows are arranged in offset or staggered relation, so that the side edges of each element are in overlapping relation with the side edges of a pair of elements of the next contiguous row. For example, the elements 17 of row 12, adjacent to outer row 11, are offset from or staggered relative to the outer row elements 16. Further, the adjacent row elements 17 each overlap or extend along and contiguous to a pair of outer row elements 16. Similarly, outer row 15 has its elements each overlapping a pair of elements 19 of adjacent row 14. Further, elements 17 and 19 of adjacent rows 12 and 14 each overlap a pair of elements 18 or intermediate row 13. Further, alternate rows have their elements in general alignment with each other laterally of the bracelets. That is, the elements 16, 18 and 20 of alternate rows 11, 13 and 15 are in respective lateral alignment with each other, as are the elements 17 and 19 of alternate rows 12 and 14.

Considering now the elements in detail, as shown in FIG. 1, the outer row elements 16 and 20 may be essentially identical, each including a body part 25 and 26, of suitable configuration, as desired. The body parts 25 and 26 may be of generally rectangular outline configuration, as illustrated in FIG. 1, or of other suitable configuration, as will appear presently. Additionally, elements 16 may include a pair of generally parallel pro-

jections 27 extending from one side of the body part 25. The projections 27 may be of generally rectangular cross-section, extending in spaced parallelism with each other, and may be of generally rectangular cross-section, having a reduced portion 28 proximate to the body 25. As in the illustrated embodiment, the pair of projections 27 may define parallel arms or legs extending from one surface of the body 25, being spaced inward from the peripheral bounding edge of the carrying surface.

The body 26 of element 20 is similarly provided with a pair of parallel, spaced projections or legs 29, corresponding to the projections 27, extending from one side surface of the body 26 and spaced inward from the peripheral edge thereof. The projections 29 may similarly be of rectangular cross section and each provided with a reduced inner end portion 30.

The adjacent row 12 may have its elements 17 each composed of a tubular body 35, which may be of rectangular outline configuration, and have its opposite ends open to define side openings 36. That is, the tubular bodies 35 of elements 17 each have laterally outwardly oppositely facing openings 36. Similarly, the elements 19 of each adjacent row 14 include a tubular body 37 having laterally outwardly opposite openings 38.

The elements 18 of intermediate row 13 are similar to the elements 16 and 20 of the outer rows 11 and 15. Each element 18 includes a generally rectangular body 40, and a pair of laterally oppositely outwardly extending legs or projections 41 on each side of the body 40. Each pair of projections 41 may be essentially identical to each other and to each pair of projections 27 and 29, that is, each pair of projections 41 may outstand from a respective side wall of the body 40, being spaced inwardly from the peripheral edge thereof, and each projection 41 may be of generally rectangular cross section having a reduced inner portion 42, for a purpose appearing presently.

In assembly, each adjacent row element 17 receives in opposite end openings 36 a pair of projections 27 and 41 of adjacent overlapping elements 16 and 18. In particular, one side opening 36 of each element 17, the left side as shown in the drawings, receives two projections 27, one from each overlapped element 16. Similarly, the right side of each element 17 receives two projections 41, one from each overlapped intermediate row element 18. In like manner, each element 19 receives on its left-hand side two projections 41, one from each overlapped element 18, and the right-hand side of each element 18 receives two projections 29, one from each overlapped element 20.

The insertion of the various projections into the side openings of alternate row elements is shown in FIG. 3. In particular, projections 27 and 41 are shown as inserted in side openings 36 of tubular bodies 35 of element 17. In the condition shown in FIG. 3, the projections 27 and 41 are not positively retained in the openings 36. However, by tools 45, shown in phantom in FIG. 4, end portions 46 of elements 17 are deformed into recesses or reduced projection portions 28, 42 positively retain the latter in the elements 17. The tools 45 are, in effect, staking tools, for deforming the retaining portions 46 into the reduced regions 28, 42.

Upon complete assembly of the bracelet 10, as shown in FIG. 2, by virtue of looseness of the projections 27, 29 and 41 in the openings 36 and 38, the bracelet is af-

forded a capability of flexure longitudinally of the rows 11, 12, 13 and 14. Also, it will now be appreciated that by the staggered or offset relationship of alternate rows, so that the elements thereof each overlap a pair of elements of a proximate row, all of the elements 16, 17, 18, 19 and 20 are positively interconnected.

A slightly modified embodiment is shown in FIGS. 5 and 6, an element 16a, and an element 18a being provided with respective projections 27a and 41a, which projections may be of constant cross section throughout their length, rather than having reduced portions as in the first described embodiment. The projections 27a and 41a enter into opposite end openings of elements 17a. The assembly procedure is completed by tools 45a serving to deform portions 46a of elements 17a into adjacent portions of projections 27a and 41a. Here again, positive interconnection is effected between all of the elements of the several rows, and a loose fit between the projections and receiving element affords the requisite flexibility.

While the elements 17 and 19 of FIGS. 1-6 have been shown as of rectangular cross section, it is appreciated that they may be of other suitable cross section, such as the octagonal open ended tubular cross section of element 17b in FIG. 7.

Also, while the projections 27, 29 and 41 of the first described embodiment have all been of rectangular cross section, it is appreciated that they may be of other suitable cross sectional configuration. For example, in FIG. 8, an element 20c may include a pair of parallel spaced projections 29c, which projections may be of semicircular cross section, if desired. Thus, the projections 29c of element 20c may engage in the open sides of tubular element 17b, being received therein with a predetermined looseness, for greater flexibility of a resultant bracelet.

While the previously described embodiments have been composed of elements of generally rectangular outline configuration in plan, it is appreciated that the bracelet elements may be of other outline configuration. Advantageously, the adjacent sides of contiguous elements are configured for conforming relation with respect to each other. One such configuration is shown in FIG. 9, wherein a plurality of elements are designated 16d, 17d, 18d, 19d and 20d, corresponding to the elements 16-20 respectively of the first described embodiment. However, the elements 16d, 17d, 18d, 19d and 20d are not of rectangular outline configuration in plan. Rather, their adjacent side edges are of nonrectangular configuration, but in conforming relation with respect to each other. In particular, the side edges of each element in FIG. 9 are of a concave V-shaped configuration, for interfitting conforming engagement with laterally adjacent elements. For example, the inner side edge 50 of elements 16d is V-shaped, as are opposite side edges 51 of the next adjacent element 17d. Also, opposite side edges 52 of intermediate element 18d are V-shaped, while opposite side edges 53 of element 19d are also V-shaped, and the inner side edge 54 of outer element 20d is V-shaped. Thus, upon assembly of the several elements 16d, 17d, 18d, 19d and 20d, the internal vertex of V-shaped side edge 50 receives the points, as at 55, of a pair of elements 17d. Similarly, each V-shaped side edge 51, 52, 53 and 54 receives a pair of V-shaped side edges of contiguous, overlapping elements, with the points of adjacent like elements en-

gaged in the vertex of an adjacent overlapping element.

A further embodiment is shown in FIG. 10, wherein a plurality of elements 16e, 17e, 18e, 19e and 20e have their contiguous side edges of nonrectangular configuration, in this particular embodiment of a convex V-shaped configuration, as at 50e, 51e, 52e, 53e and 54e, respectively. Here again, the element side edges are in specifically configured conforming relation with respect to each other, for example the external V-shaped side edge configuration 50e overlapping and entering into the vertex defined between an adjacent pair of elements 17e. Similarly, each external V-shaped side edge configuration of the embodiment of FIG. 10 enters into the vertex defined by an adjacent pair of contiguous elements, for overall conforming engagement.

An additional embodiment is shown in Fig. 11, wherein a plurality of elements are designated 16f, 17f, 18f, 19f, 55, 56 and 20f. That is, the elements 16f, 17f, 18f, 19f and 20f may correspond to elements 16, 17, 18, 19 and 20. However, the embodiment of FIG. 11 illustrates that the number of rows may be different, say by including additional elements 55 and 56 to form seven rows. Of course, the number of rows may also be less, preferably being at least three, but may be of any odd number, as desired.

From the foregoing, it will be seen that the present invention provides a bracelet construction which is well adapted for manufacture and assembly of gold-filled components, being extremely simple and durable in construction, economical in cost, and which other wise fully accomplishes its intended objects.

It will be appreciated that the end edge of the outer elements in all of the embodiments of this invention may be readily cut or other wise shaped, after assembly, for the purpose of providing an edge contour which will be most complimentary to the shape of an associated watch case. By way of example, the end edge 60, as best shown in FIG. 9, has been scalloped.

Although the present invention has been described in some detail by way of illustration and example for purposes of clarity of understanding, it is understood that certain changes and modifications may be made within

the scope of the invention.

What is claimed is:

1. In a bracelet construction, the combination comprising a plurality of longitudinally extending rows of elements, the rows being in side-by-side relation with each other, a pair of laterally inward projections on each element of each outer row, the elements of each row adjacent to an outer row having openings in their outer sides for receiving said projections, said adjacent row elements each being located to receive projections of a pair of outer row elements, and retaining means retaining said projections in said openings, whereby said element are all interconnected.

2. A bracelet construction according to claim 1, said retaining means comprising deformed portions of said adjacent row elements deformed into retaining engagement with said received projections.

3. A bracelet construction according to claim 1, said retaining means loosely retaining said projections to permit of relative movement between interconnected elements and afford flexibility to said bracelet.

4. A bracelet construction according to claim 3, said pairs of projections each being generally parallel, for flexibility of said rows in parallelism with each other.

5. A bracelet construction according to claim 1, said adjacent row elements each comprising a tube having its opposite ends open and defining said openings.

6. A bracelet construction according to claim 5, said outer row elements being in respective lateral alignment with each other, and said adjacent row elements each being offset relative to said outer row elements to overlap a pair of the latter.

7. A bracelet construction according to claim 6, the overlapping edges of said elements being configured for conforming relation with each other.

8. A bracelet construction according to claim 1, wherein the end edges of said elements for any one of said rows is scalloped.

9. A bracelet construction according to claim 1, wherein the end edges of said elements for any one of said rows is tapered.

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