April 28, 1959 C. J. OBST 2,883,727

END CONSTRUCTION FOR AN EXPANSION BRACELET

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Fig. 1.

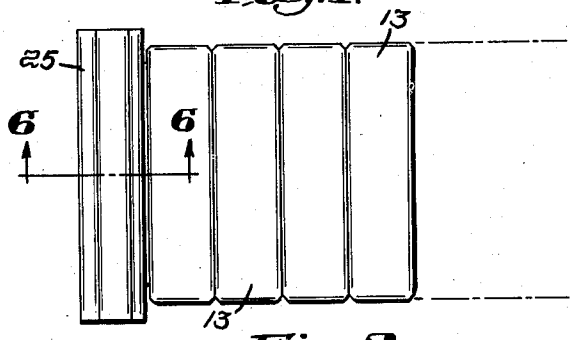


Fig. 2.

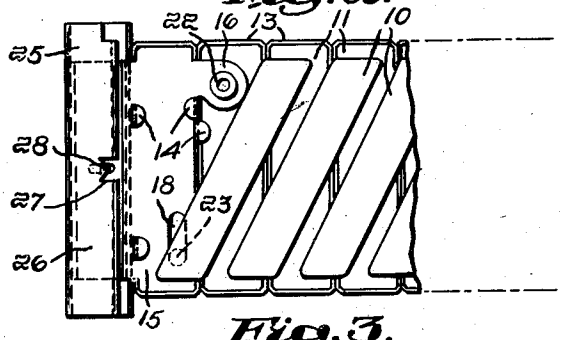


Fig. 3.

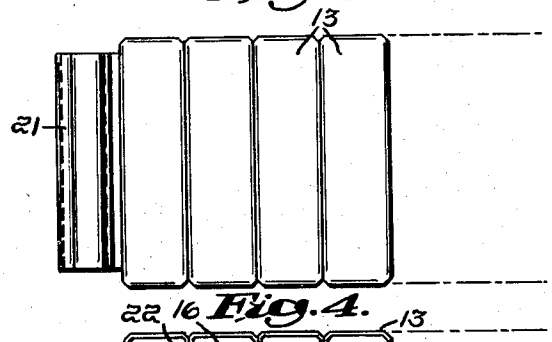
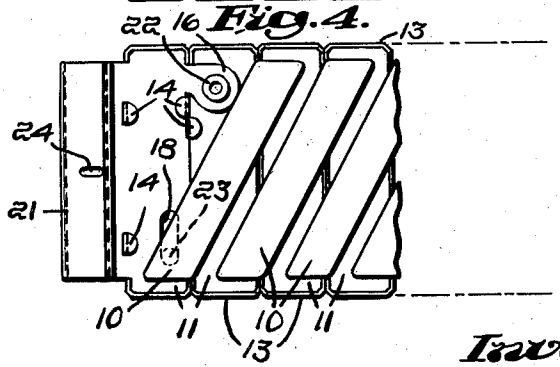


Fig. 4.



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Fig. 5.

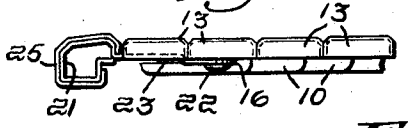


Fig. 6.

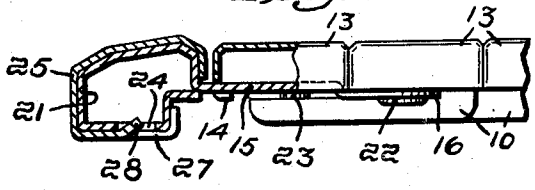


Fig. 7.

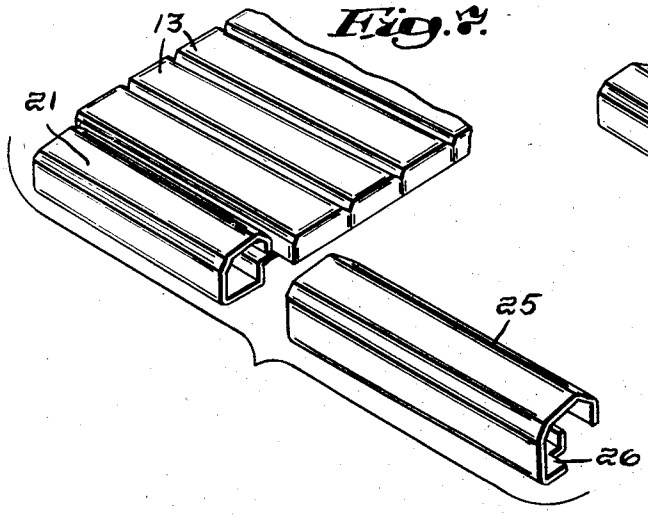


Fig. 8.

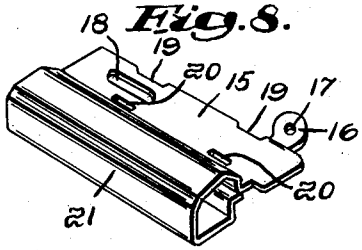
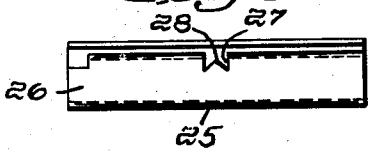


Fig. 9.



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END CONSTRUCTION FOR AN EXPANSION BRACELET

Charles J. Obst, West Barrington, R.I.

Application March 12, 1957, Serial No. 645,533

4 Claims. (Cl. 24—265)

My present invention relates to the jewelry art and more particularly to the end construction for an expansion type watch bracelet.

The principal object of the present invention is to provide an end connector for an expansion bracelet which is readily adaptable to fit any size watch.

Another object of the present invention is to provide an end connector for an expansion bracelet upon which any design of bracelet shell can be mounted.

A further object of the present invention is to provide an end connector for an expansion bracelet which can be made in a single size and which is readily adaptable to all other sizes.

Another object of the present invention is to provide an end construction for an expansion bracelet which will result in a great saving in tool and assembly costs.

A further object of the present invention is to provide an end connector for an expansion bracelet which will add strength to the end connections of the bracelet.

A further object of the present invention is to provide an end construction for a watch bracelet which is simple in construction and easy and economical to manufacture and assemble.

With the above and other objects and advantageous features in view, my invention consists of a novel arrangement of parts, more fully disclosed in the detailed description following, in conjunction with the accompanying drawings, and more particularly defined in the appended claims.

In the drawings:

Fig. 1 is a top plan view of an end portion of a watch bracelet having an end connector and adapter embodying my invention.

Fig. 2 is a rear elevation thereof.

Fig. 3 is a top plan view similar to Fig. 1 with the adapter removed.

Fig. 4 is a rear elevation thereof.

Fig. 5 is a side elevation of the construction shown in Fig. 1.

Fig. 6 is a section taken on line 6—6 on Fig. 1.

Fig. 7 is a perspective view showing the end piece and adapter assembly.

Fig. 8 is a perspective view of the end piece.

Fig. 9 is a bottom plan view of the adapter.

In the manufacture of expansion type watch bracelets it is customary to provide a series of pivoted link members and springs to form the basic bracelet called a skeleton. The particular design of bracelet is provided in an ornamental shell member which is mounted on each link of the skeleton. With this type of construction the skeleton can be made of a cheaper metal in a heavy strong gage, while the design embodied in the shell can be stamped from much thinner stock and gold plated or otherwise ornamented. This permits the manufacturer to have a single basic set of tools for the skeleton and to provide a simple tool for the shell with each change of design. However, at the end of each bracelet there must be an end piece for attaching to the bail of a watch.

This end piece must come in varying widths to fit different size watches. It must also have the same design as the shells on the particular watch.

As a result of the foregoing, each design of watch bracelet must be provided with a more complicated tool for forming the end piece and this tool must be made in three or four different sizes. Furthermore, although the assembly of the shells on the links is rapid and virtually automatic the end pieces must be put on by hand for each different design and size. If the manufacturer wishes to keep up with his orders he must keep a large inventory to cover each design and each size.

The present invention is designed to eliminate all these problems. It has been proposed to provide an end connector in a single small size and then to provide adapters which will permit the size to be varied to fit the watch. However, such constructions still must be made with separate tools for each design of bracelet. The present invention provides an end connector which can be made a basic part of the skeleton and which requires no changes with the change in designs. Furthermore, the end connector of the present invention is designed to take a shell in the same manner as any of the intermediate links and thus eliminates separate hand assembly.

Referring more in detail to the drawings, the conventional expansion bracelet comprises a plurality of links **10** and **11**, the links **10** being at the bottom and the links **11** at the top pivotally mounted with springs in a conventional manner (not shown) to form the skeleton of an expansion bracelet. The top links **11** are provided with thin shells **13** which comprise the ornamental portions and may be formed in any desired design and coated with precious metal. The shells **13** are provided with lock tabs **14** along their bottom edges for locking them to the links **11**. The above construction has been standardized so that most expansion bracelets are made in this manner with a basic skeleton which the manufacturer can use for all or most of his designs and changes in design effected by the use of different shells **13**. The manufacture and assembly of the expansion bracelet has therefore been reduced to a maximum of automatic operations making the item as economical as possible. However, the end connections involve manufacturing and assembly problems which are solved by the present invention.

Referring to Fig. 8, I provide an end connector formed of sheet stock preferably of a strong heavy gage thicker than the shell **13**. The connector can be formed on a stamping press and comprises a flat elongated rectangular portion **15** corresponding in shape to one of the upper links **11**. Adjacent one end the portion **15** is provided with an integral laterally extending tab **16** having a central opening **17**. Adjacent the opposite end the portion **15** is provided with an elongated slot **18** positioned slightly off center and close to the free edge parallel to the longitudinal axis of the portion **15**. The free side edge on which the tab **16** is located is provided with spaced cutout portions **19**. On the opposite edge, opposite the portions **19** are slots **20**. Extending from this edge integrally with the portion **15** is an end connector loop **21**. The loop **21** is narrower than the length of the portion **15**. This loop portion may be formed in a generally rectangular section as illustrated or can be made round or any other shape. The material is bent outwardly, upwardly, then outwardly, then downwardly, then at an angle of 90° back, then upwardly, and then back to the point of beginning.

With the integral unit shown in Fig. 8, it is a simple matter to mount it at the end of the bracelet as shown in Figs. 3 and 4. The tab portion **16** is provided with a pivot member or rivet **22** which extends through the last top link **11** of the bracelet. The last bottom link **10** is provided with a pivot pin **23** which is mounted in

the slot 18. A final shell 13 is positioned over the portion 15 with the tabs 14 entering the slots 20 at one edge and entering the cutouts 19 at the other edge. The mounting of the shell 13 on the end connector is therefore identical to the mounting of the shell on the intermediate links 11 and can be done in the same manner and by the same tools. Furthermore, it should be noted at this point that in the constructions heretofore in use the rectangular plate portion 15 comprises one unit and the end connecting loop 21 and the last shell 13 comprises a second unit. With that type of construction the pulling strain on the loop 21 is transmitted through the last shell to the tabs 14 and thus the small tabs bear the entire strain of the bracelet. In the construction herein described, the last shell is independent of the loop 21 and its tabs serve only to hold the shell. The strain on the loop is transmitted directly to the plate 15 of which it is an integral part and the plate 15 is pivotally connected directly to the skeleton. Thus the basic skeleton can be formed complete with end connectors and the variations in design in the different shells be made by mounting these shells not only on the bracelet but also on the end connector.

The above construction permits the basic skeleton to include the full bracelet including the end connector. This solves one manufacturing problem. However, the loop portion 21 must be inserted in the bail of a watch with the pivot pin extending through the loop. Watch cases come in varying sizes and the space between the arms of the watch bail varies from ½ inch to ⅝ inch to $^{11}/_{16}$ inch to ¾ inch. It would therefore normally be necessary to provide the end piece shown in Fig. 8 with different lengths of loop portions 21 corresponding to the above dimensions. This slows production and delivery and forces the retail jeweler to make guesses as to the quantities to order in each size. The present invention therefore includes a device for overcoming this difficulty by manufacturing the end piece and the skeleton in a single basic size and then providing for a simple rapid adjustment.

In accordance with the present invention the loop 21 is made in a basic ½ inch width. The bottom wall of the loop, as shown in Fig. 4 is provided with a small transverse slot 24. Referring to Figs. 7 and 9, I now provide a sleeve 25 bent from sheet stock in a general rectangular cross section corresponding to the shape of the end loop 21. However, the internal size of the sleeve 25 is such that it will slide easily over the loop 21 when placed in end to end relation as shown in Fig. 7. The bottom wall 26 is provided at its free edge with a cutout portion 27 having an integral tab 28. The sleeve 25 can be readily stamped from sheet stock and furnished in widths of ⅝ inch, $^{11}/_{16}$ inch, ¾ inch or larger widths if necessary. The manufacturer can then complete the different designs of bracelets with the end piece shown in Fig. 8. When the retailer orders a larger size it is merely necessary to slide the sleeve 25 over the loop 21 into the position shown in Figs. 1 and 2. The cutout portion 27 will register with the slot 24 in the bottom of the loop. The tab 28 is then bent inwardly as shown in Fig. 6 preventing sliding movement of the sleeve 25. Since the pivot pin on the watch still passes through the loop 21 there is no strain on the sleeve 25. It can therefore be made of thin ornamental material. Also the width of the sleeve is such that it will fill the space between the arms of the watch bail and there will be little or no endwise strain. The tab 28 is therefore only needed to hold the sleeve in place during shipping and assembly. The retail jeweler can remove the sleeve if desired and replace it with a different size sleeve. In some instances the bracelet can be shipped with the original loop and a supply of different sized sleeves can be given to the retailer so that he can fit the bracelet to the particular watch being sold.

With the above construction a great inventory advantage is obtained both by the manufacturer and the retailer. Each design need be carried only in one size, the relatively cheap sleeves being used for the varying sizes. The saving in manufacturing cost is particularly great. One end connector tool is all that is necessary for all designs and for all sizes. No separate tools have to be made for the end pieces at each change of design since the same shell 13 will fit the basic end plate 15. The resultant bracelet is also stronger since the heavy stock at the end piece forms a direct connection from the bracelet to the watch. The end piece with the loop 21 has been illustrated as rectangular and straight. Its cross section can be varied and the entire loop portion 21 can be made curved or ovate to fit different shaped watches. Other changes in construction and advantages of the present invention will be readily apparent to a person skilled in the art.

I claim:

1. In a lazy tong type expansion watch bracelet comprising a base skeleton of pivotally interconnected upper and lower links, a series of ornamental shells each of which receives a respective one of said upper links and is connected thereto, an end connector for at least one end of said skeleton including an end link planar portion of generally the same size and configuration as said upper links, an end ornamental shell of generally the same size and configuration as said series of shells receiving said end link portion and being connected thereto, and said end link portion having an integral extension portion, a tubular portion connected with said extension portion having end wall portions on both sides of the end link planar portion so as to be of tubular form of preselected length adapted to receive a spring bar therethrough, said end link planar portion having at least one ornamental shell tab-receiving slit formation at the side thereof having said integral extension portion with at least one edge thereof spaced from said tubular portion so as to provide a recess between the shell for said end link and said tubular portion adapted to receive a portion of a sizing sleeve therein.

2. In a lazy tong type expansion watch bracelet comprising a base skeleton of pivotally interconnected upper and lower links, a series of ornamental shells each of which receives a respective one of said upper links and is connected thereto, an end connector for at least one end of said skeleton including an end link having a planar portion, an end ornamental shell receiving said planar portion of the end link and being connected thereto, and said end link having a tubular extension portion of preselected length adapted to receive a spring bar therethrough, said tubular extension portion having wall portions extending outwardly in substantially opposite directions from the plane of said planar portion of the end link throughout substantially the entire length of said tubular extension portion, with one of said wall portions being offset from the other wall portion in a direction away from said skeleton, said other wall portion being integral with said planar portion of the end link and providing an outside surface spaced from the adjacent ornamental shell on said end link, said tubular extension portion including a further wall extending from said one wall to said other wall so as to bridge the gap formed by the offset therebetween, and a sizing sleeve received on said tubular extension portion with retainer walls closely cooperative with said one wall portion and said other wall portion along substantially the entire length thereof with one of said retainer walls received in the space between said outside surface of said other wall portion and said adjacent shell.

3. An assembly according to claim 2 wherein said end link portion is of generally the same size and configuration as said upper links, and said end ornamental shell is of generally the same size and configuration as said series of shells.

4. An assembly according to claim 2 wherein said end link portion has at least one ornamental shell tab-receiv-

ing slit formation at the side thereof having said extension portion.

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