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L. C. MILLER

2,430,777

EXPANSIBLE BRACELET

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Fig. 1.

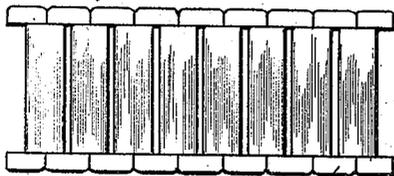


Fig. 2.

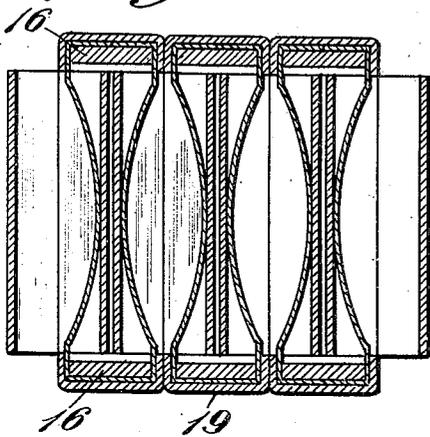


Fig. 3.

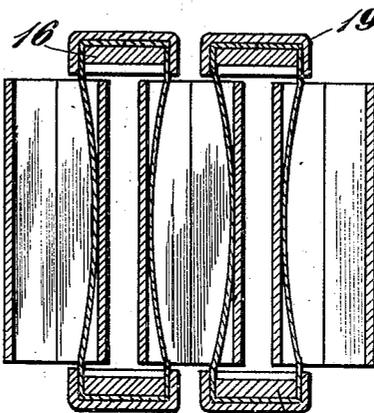


Fig. 4.

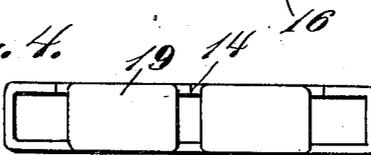


Fig. 5.

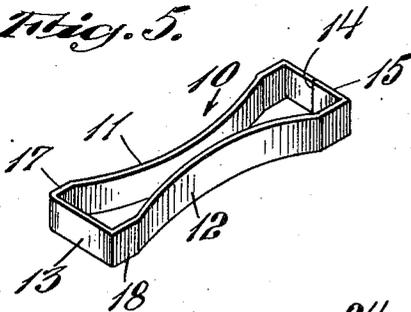
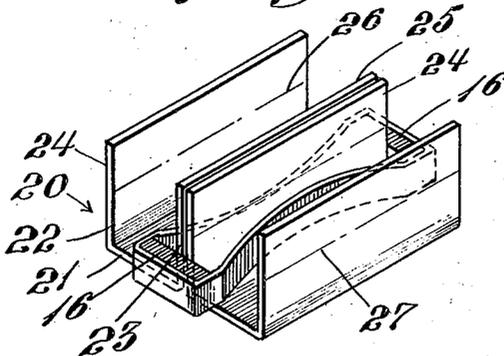


Fig. 6.



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EXPANSIBLE BRACELET

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9 Claims. (Cl. 59-79)

1

This invention relates to a bracelet chain and is particularly designed for the purpose of attaching a wrist watch about the wrist.

In the manufacture of a bracelet, simplicity of design is important, as bracelets are produced in large quantities. The simplicity of the parts which are made in multiple operation go a long way toward making the bracelet competitive in the market. Expansible bracelets have been of a more or less complicated construction.

One of the objects of this invention is to provide an expansible bracelet which will be of simple construction.

Another object of this invention is to provide an elastic bracelet which will have sufficient expansion in the length which normally encircles the wrist so that the bracelet may be removed over the hand without detaching the bracelet from the watch.

Another object of this invention is to make a bracelet which will be ornamental in appearance.

Another object of this invention is to provide a bracelet which, although extending widthwise as it expands, will nevertheless extend such a minute amount that it will not be undesirably noticeable when the bracelet is in use.

With these and other objects in view, the invention consists of certain novel features of construction, as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings:

Fig. 1 is a top plan view of the bracelet chain in contracted position;

Fig. 2 is a sectional view with the links in contracted position;

Fig. 3 is a sectional view showing the links in expanded position;

Fig. 4 is an end view of a few of the links of a bracelet chain;

Fig. 5 is a perspective view of the spring member;

Fig. 6 is a perspective view illustrating the spring member as placed within two of the tubular links before the links are folded into final position.

In proceeding with this invention, I fold into generally rectangular frame shape a ribbon of resilient stock so arching the side as to enable them to flex. A series of such frames are connected together by tubular links which are folded about an inwardly arched wall of two adjacent links, or it might be considered that one wall of each tubular link is positioned through a frame and then this wall is bent over to provide the bottom wall of the tubular link.

2

With reference to the drawings, 10 designates generally a spring member which is formed of an inwardly arched spring 11 and another inwardly arched spring 12. These springs are connected together by a bridging member 13 at one end and 15 at the other end. When all of the parts 11, 12, 13, and 15 are formed of a single piece of stock, the ends abut as at 14 forming the bridging member 15. Solid plugs 16 are embraced by the flattened portions 17 and 18 of the ends of each spring, 11 and 12, as shown in the sectional views of Figs. 2 and 3. This maintains the arms in spaced relation regardless of whether they are connected by a bridging member such as 13 or 15. Caps 19 are also provided to cover the ends of these springs and consist of cup-shaped formations which slide over the ends of each frame 10. These caps also assist in maintaining the springs in proper relation.

The links designated generally 20 are of tubular formation, each formed from sheet stock having a top wall 21, end walls 22, 23, while the bottom wall is formed from inwardly folded portions 24 and 25, as shown standing upwardly in Fig. 6 prior to folding along the lines 26 or 27.

It will be apparent that one tubular member may embrace oppositely bowed arcuate springs which extend outwardly from the ends of the tubular formation, and the ends of these springs in two adjacent links will be connected together, such for instance as the ends of the spring in one link may be connected to the ends of the spring in the next link. So long as these springs at their ends are connected and the arcuate portions are embraced, the springs will be flexed as a tension is placed upon the links in the direction of their extent or length so that the links will expand in an elastic manner.

From an assembly standpoint, it will be apparent that by forming two springs from a single piece of ribbon stock, the assembly operations are much easier as there are less parts to handle. Thus, it becomes more desirable to provide open U-shaped links such as shown in Fig. 6 and assemble the spring frames into each link, such as shown therein, so that one frame member or spring embraces the walls 24 and 25 of two adjacent links. Then by folding these links into position or closing them into tubular form the bracelet is assembled.

It will of course be apparent that the plugs or bracing parts 16 are placed in each of the frames as such bracing is needed, such as at the bridging portions 15 which are formed by abutting the two ends of the ribbon together.

3

I claim:

1. A chain comprising a series of open ended tubular links, a pair of arcuate springs oppositely disposed in each link and bowed away from each other, and means to connect the end of one spring in one link to the end of one spring in the next link to hold the spring ends in spaced relation.

2. A chain as set forth in claim 1 wherein each link is rectangular in cross section.

3. A chain as set forth in claim 1 wherein each link comprises a folded rectangular tube.

4. A chain as set forth in claim 1 wherein the spring in one link is of the same piece of material as the spring in the next link.

5. A chain as set forth in claim 1 wherein the connection of the ends of the spring in one link with the spring in the next link is about a solid plug.

6. A chain as set forth in claim 1 wherein a cap is placed over the connected ends of the springs.

4

7. A chain comprising a series of spring members of generally frame form with opposite walls of the frame arched inwardly and a tubular link embracing the arched walls of adjacent spring members.

8. A chain as set forth in claim 7 wherein each frame is of folded ribbon formation.

9. A chain as set forth in claim 7 wherein a cap is placed over the ends of the members which protrude beyond the links.

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REFERENCES CITED

The following references are of record in the file of this patent:

FOREIGN PATENTS

Number	Country	Date
824,076	France	Nov. 3, 1937