Oct. 20, 1931. H. SEIDMAN ET AL 1,828,476

ARTICULATED DEVICE

Filed March 5, 1930

Fig. 1.

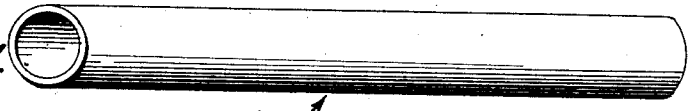


Fig. 2

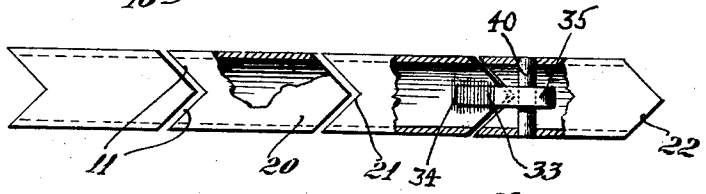


Fig. 3.

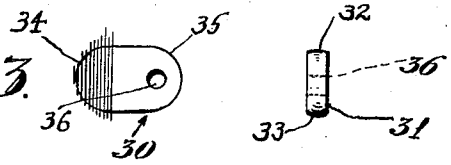


Fig. 4.

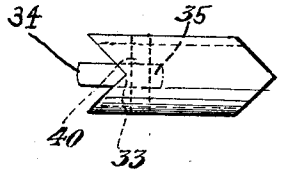


Fig. 5.

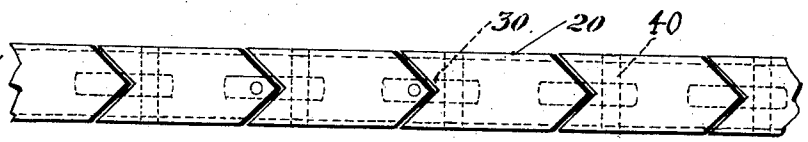


Fig. 6.

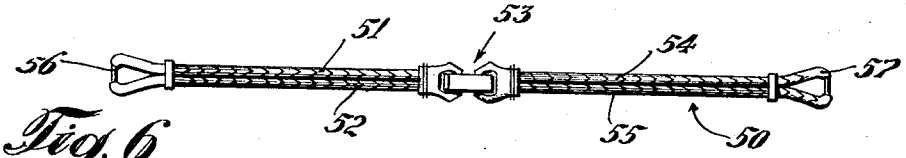
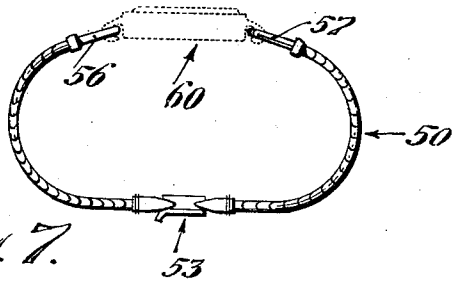


Fig. 7.



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Patented Oct. 20, 1931 1,828,476

UNITED STATES PATENT OFFICE

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ARTICULATED DEVICE

Application filed March 5, 1930. Serial No. 433,247.

Our present invention relates to articulated devices, such as bracelets, chains, straps for wrist watches and the like, and aims to devise articles of the general character specified which are simple in construction, which may be readily and conveniently fabricated and assembled, and which are neat and attractive in appearance, as well as being highly convenient and satisfactory in use. Other objects and advantages of the devices of the present invention, particularly as exemplified in the following illustrative embodiment of the same, will readily occur to those skilled in the art to which the present invention relates.

In the accompanying specification we shall describe, and in the annexed drawings more or less diagrammatically exemplify, an illustrative embodiment of the present invention. It is, however, to be clearly understood that our invention is not limited to the specific embodiment thereof herein shown and described for purposes of illustration only.

Referring to the drawings, in which we have more or less diagrammatically exemplified the aforesaid illustrative embodiment of the present invention:

Fig. 1 is a plan view of a tubular member from which the tubular segments of the aforesaid illustrative embodiment of the present invention may be readily fabricated;

Fig. 2 is a partial plan and partial longitudinal sectional view of a series of tubular segments from which the aforesaid illustrative embodiment of the present invention may be readily fabricated;

Fig. 3 is a plan view of the connecting or hinge post which may be used hingedly to connect successive tubular segments;

Fig. 4 is a plan view of a combined tubular segment and hinge post in accordance with the principles of the present invention;

Fig. 5 is a plan view of a series or succession of tubular segments and associated hinge post in the form in which the same are connected in the fabrication of the aforesaid illustrative embodiment of the present invention;

Fig. 6 is a plan view of a complete bracelet; and

Fig. 7 is a view similar to Fig. 6 showing the bracelet of the present invention as applied to a wrist watch.

Referring now to the aforesaid illustrative embodiment of the present invention, and with particular reference to the drawings illustrating the same, 10 in Fig. 1 of the drawings indicates a tubular member from which the tubular segments constituting the links of the aforesaid illustrative embodiment of the present invention may readily be cut. The tubular member 10 may be of any desired diameter, being usually a relatively small fraction of an inch and is usually made of precious metal, although it may be made of any desired material. Its bore may likewise, vary within desired limits, it being sufficient merely that it have sufficient size to permit the reception of a hinge post or the like of sufficient strength to serve satisfactorily its purpose of hingedly connecting successive tubular segments made in the manner now to be described.

In making the tubular segments in accordance with the principles of the present invention, we cut the tubular member 10 along the lines indicated by reference characters 11. It will be noted therefore that the cuts 11 are V-shaped. It may here be stated that the tubular member 10 may, before being cut into the segments 20 more clearly illustrated in Fig. 2 of the drawings, be given a slight curvature of the jig or die which holds the tubular member 10 for the cutting or severing operation. Accordingly, if the tubular member 10 is initially round or is forced into such a slight curvilinear form, each of the tubular segments 20 will have a slight curvilinear form. The purpose of this is to predispose the members 20 assembled in the final bracelet illustrated in Fig. 6 of the drawings towards a curvature around the wrist which the final bracelet is intended to surround. In other words, a bracelet made up of slightly curilinear link members 20 will naturally assume a curvilinear position around the wrist of the wearer

and will less readily assume a curvilinear position in the opposite direction.

As shown in Fig. 2 of the drawings, each link member 20 has a substantially V-shaped cut 21 at one end and a similarly shaped projection 22 at the other end. In certain cases also, as is preferred, the link members 20 will have a slight curvilinear conformation for the reasons already stated earlier in this specification.

In Fig. 3 of the drawings we have shown a member which may be in the form of an oblong or elongated member generally designated by reference character 30, the cross dimension of which is preferably of such size as to enable the piece 30 to fit snugly into the tubular link members 20. As clearly shown in Fig. 4 of the drawings, the member 30 may be soldered along its edges 32 and 33 to the inner wall of the tubular member 20 so as to be securely and rigidly held therein at its end. The other end 35 of the post 30 is intended to be hingedly secured by a suitable pin or rivet 40 which will pass through the opening 36 in the hinge post 30.

As shown in Fig. 5 of the drawings, where we have shown an assemblage of tubular link members and their associated posts, the hinge post 30 rigidly connected to one of the tubular link members 20, is hingedly connected to the succeeding hinge member 20 by the pin or rivet 40 which passes through and is soldered or otherwise fixedly secured in the adjacent end of the adjoining tubular link member 20 and is freely rotatable in the opening 36 at the other end of the hinge post 30. It is, of course, to be clearly understood that the angle of "tolerance" or of movement of the tubular link members 20 with respect to each other is limited by the V-shaped cut at one end and the V-shaped projection at the other end of each of the tubular link members 20. It is also to be recalled that due to the slight curvature which is preferably given each of the tubular link members 20, the assembled articulated structure is biased towards a curvature around the wrist or other member to which the structure is to be applied and against a curvature in the opposite direction.

The tubular link members, assembled in the manner shown in Figs. 4 and 5 of the drawings, may be assembled in the form of the complete bracelet shown in Fig. 6 of the drawings where the bracelet has been generally designated by reference character 50 and the watch which it holds by the reference character 60. It will be noted that the bracelet 50 is made up of two link structures 51 and 52, each being of the articulated construction described in detail above, on one side of the connecting member 53 and of two other such articulated link structures 54 and 55 on the other side of the connecting member 53, 56 indicating the means for connecting the bracelet 50 to one side of the watch 60 and 57 indicating the means for connecting the bracelet 50 to the other side of the watch 60.

This completes the description of the aforesaid illustrative embodiment of the present invention. It will be noted that the construction is simple and the devices made in accordance therewith may be readily and economically fabricated and assembled. The device possesses the necessary mechanical strength and flexibility in use and is furthermore very neat and attractive in appearance.

Other superiorities and advantages of the devices of the present invention, particularly as exemplified in the aforesaid illustrative embodiment of the same, will readily occur to those skilled in the art to which the present invention relates.

It may here be stated that the tubular sections may be straight instead of curved and that they may be made in half or other fractional tubular sections instead of from unitary tubular sections. It may here further be stated that instead of soldering one end of each pin or hinge post within one of the tubular sections, the hinge posts may be attached by swaging or other suitable metal working operation.

It may here also be stated that the original tubular member from which the tubular link segments are cut may initially be straight but that the tubular link segments may themselves be given a slight curvilinear conformation by being placed in a curvilinear jig during the operation of attaching the hinge posts.

What we claim as our invention is:

1. An articulated structure of the general character specified, comprising a plurality of hingedly associated links each comprising a substantially tubular member having a substantially V-shaped conformation at one of its ends.

2. An articulated structure of the general character specified, comprising a plurality of hingedly associated links each comprising a substantially tubular member having a substantially V-shaped conformation at each of its ends.

3. An articulated structure of the general character specified, comprising a plurality of hingedly associated links, each link comprising a tubular member having a substantially V-shaped conformation at each of its ends, the V's at the ends of said links being substantially parallel to each other, and a series of hinged posts one end of each of which is fixedly secured and the other end of each of which is hingedly secured in the corresponding end of the adjacent link.

4. An articulated structure of the general character specified, comprising a plurality of hingedly associated links each comprising a substantially tubular member having a sub-

stantially V-shaped conformation at each of its ends, each of said tubular bodies being slightly curved in the same general direction and to substantially the same degree.

5. An articulated structure of the general character specified, comprising a plurality of hingedly associated links, each link comprising a tubular member having a substantially V-shaped conformation at one of its ends, the V's at the ends of said links being substantially parallel to each other, and a series of hinged posts one end of each of which is fixedly secured and the other end of each of which is hingedly secured in the corresponding end of the adjacent link, each of said tubular bodies being slightly curved along a substantially circular arc in substantially the same direction and to substantially the same degree.

In testimony whereof, we have signed our names to this specification this 3rd day of March, 1930.

HYMAN SEIDMAN.
HENRY COHAN.