May 8, 1951 E. E. FACHON 2,552,415

CLASP FOR BRACELETS

Filed March 7, 1947

Fig. 1.

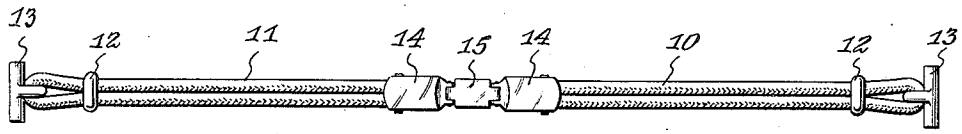


Fig. 2.

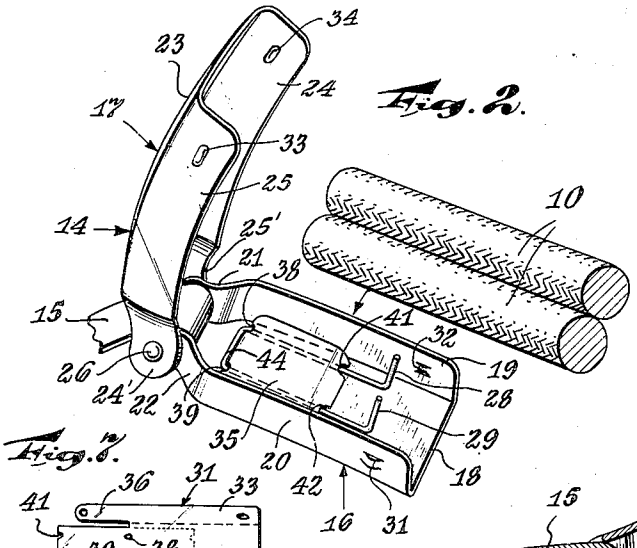


Fig. 3.

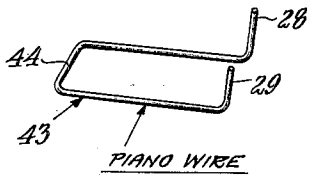


Fig. 5.

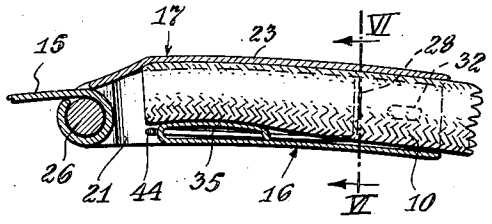


Fig. 6.

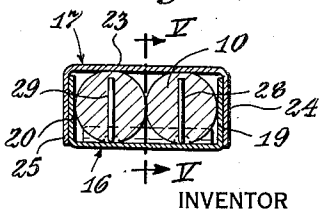


Fig. 4.

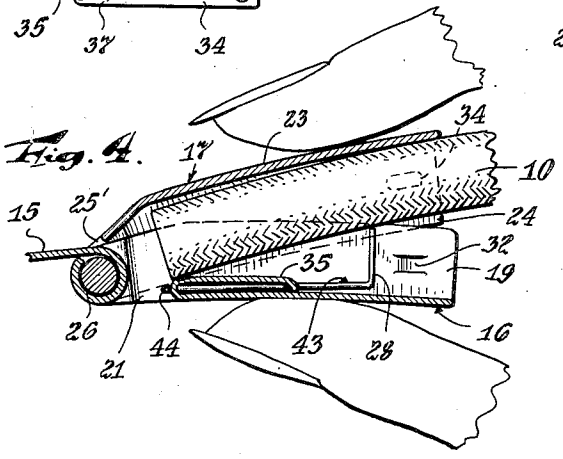
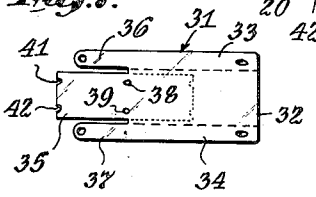


Fig. 7.



INVENTOR

EMIL E. FACHON

BY J. W. Greenlaw

ATTORNEY

Patented May 8, 1951

2,552,415

UNITED STATES PATENT OFFICE

2,552,415

CLASP FOR BRACELETS

Emil Eugen Fachon, Edgewood, R. I., assignor to Bulova Watch Company, Inc., New York, N. Y., a corporation of New York

Application March 7, 1947, Serial No. 732,989

3 Claims. (Cl. 24—265)

1

This invention relates to an improvement in fastening devices and relates more particularly to devices of this character for connecting the ends of a bracelet or wrist watch strap to a link or center catch.

Fasteners of the type to which the present invention relates are employed as end clasps or connections for the well known cord bands used to hold a watch on the wrist. In cord bands of this type it is usually the practice to pass a length of cord through one eyelet or bail of a watch bringing the two free ends of the cord together to be connected to the free ends of another length of cord passed through an opposite eyelet of the watch. Each pair of free ends of a cord must be provided with a means called a terminal catch or connector to connect with what is known as a separable link or center catch which latter may be opened or closed to remove or attach the bracelet on the wrist.

It is important to note that a connector or terminal clasp of this type must be readily removable and quickly attachable since the object of providing the terminal connectors is to permit application of a new cord or the shortening of the cord to fit a given wrist as the case may be. The importance of providing a positive and permanent grip will readily be appreciated since the safety of the watch depends on the effectiveness of the gripping or holding function of the connector.

Many different types of connectors have been used, most of which depended on a cam action to force a number of sheet metal claws or teeth into the ends of the cord. The cords usually provided as part of the band or bracelet are of cylindrical form and of a woven material and, although capable of being compressed between jaws, offer a certain amount of resistance to compression and tend, by reason of an inherent resiliency to assume their original cylindrical form thereby subjecting any clamping type of holding means to a continued stress which, combined with an unidirectional applied force, tends to force the jaws open. Furthermore, bands of this character when holding a watch in place are often subjected to relatively severe accidental pull which has heretofore made it necessary to provide holding means in the form of complicated clamping elements which in many cases failed to hold and made the connector not only difficult to apply but increased the cost of manufacture both in material and assembly.

It is an object of the present invention to provide a connector of the character described of a

2

simple and effective construction with a minimum number of parts.

Another object of the invention is to provide a connector which when applied to the ends of a cord provides a positive grip against accidental removal.

Another object of the invention is to provide a connector having means to pierce the cord ends to lock the cord against relative endwise movement.

Another object of the invention is to provide a connector whereby each cord end is individually pierced with a holding member and means for locking the cords in position when pierced.

Other objects and advantages of the invention will be more fully understood by reference to the following description together with the accompanying drawing, in which

Fig. 1 shows a cord bracelet or band illustrating the present invention as employed for connectors applied to the ends of cords and attached to an intermediate link or center catch in the usual manner;

Fig. 2 is an enlarged perspective view of a connector constructed in accordance with the present invention in open position ready to receive the ends of a cord;

Fig. 3 is a perspective view of what is herein termed a piercing member or claw;

Fig. 4 is a longitudinal cross-sectional view of the present connector about to be closed for attachment to the end of a cord;

Fig. 5 is a view similar to Fig. 4 but shows the connector attached to the cord.

Fig. 6 is a cross sectional view taken on line VI—VI in Fig. 5, and

Fig. 7 is a developed view of one of the parts of the connector.

Although the present invention may be used for any type of bracelet or band where a terminal connector is required, it is shown in Fig. 1 as applied to a popular form of wrist watch band comprised of looped cords 10 and 11.

The cords 10 and 11 are usually of a woven material of cylindrical form provided with metal loops or slip rings 12 to hold the cords in parallel relationship and to provide eyelets for end-pieces 13 whereby the bracelet may be secured to a wrist watch or to an article of jewelry.

The free ends of the cords are as shown provided with connectors or terminal-clasps 14 constructed in accordance with the present invention and attached to a center catch or link 15. The clasps or connectors 14 are of similar con-

struction and a description of one will answer for both.

As clearly illustrated in Fig. 2 the present connector comprises a pair of hinged members consisting of a bottom or receiver member 16 and an upper or cover member 17. The receiver member is of trough shape having a bottom wall 18 and side walls 19 and 20. These side walls extend beyond the bottom wall at one end thereof to provide extensions or ears 21 and 22. The top member or cover 17 is formed with a top plate 23 and flanges 24 and 25. The cover member 17 is so proportioned that it may be moved to inclose the receiver member with flanges 24 and 25 disposed on the outer sides of walls 19 and 20. The flanges 24 and 25 of the cover member 17 extend beyond the top plate 23 to provide ears 24' and 25' similar to ears 21 and 22 of the side walls. Both sets of ears 21—22 and 24'—25' are so shaped as to be connected by a pintel 26 to be hingedly connected. Each opposite pair of ears is so spaced from the other pair as to permit the center link 15 to be attached to the pintel 26.

As will be evident from the foregoing the present invention provides a connector consisting of a pair of hinged members arranged to close one upon the other to provide an enclosure or box. Connectors of this general type have been in use heretofore but owing to the difficulty of effectively holding the cord ends against accidental removal complicated clamping means were employed often requiring relatively intricate toggel or cam members to provide the necessary pressure to force gripping jaws to depress and hold the cord ends.

The present construction avoids any complicated mechanism by providing a pair of piercing elements 28 and 29 disposed perpendicular to the bottom wall 18 of the receiver member 16. These piercing elements are preferably formed from a fine wire as indicated in the drawing.

Good results have been attained by using what is known as music or piano wire about size No. 3 approximately .011 of an inch in diameter. The exceedingly small diameter of the wire used is important since it makes possible the provision of needle like members which pass freely through the woven cord and provide a positive anchor against removal of the cord ends when subjected to relatively severe endwise stress.

When the cord ends are placed in the receiver member 16 a very slight pressure causes the piercing elements 28 and 29 to pass through the cords as shown in Fig. 6.

The cover member 17 is then closed over the cord ends and held closed when lugs 31 and 32 on the receiver member 16 are snapped into depressions 33 and 34 on cover member 17. The hinged members when closed serve to provide a symmetrical housing for the cord ends and it is obvious that the cover 17 may be designed to give any required ornamental effect.

The piercing members when positioned at right angles to the bottom wall of the receiver member 16 have been found in practice to be of ample strength to hold a cord owing to the rigidity of the wire employed even though its diameter is exceedingly small. The piercing members 28 and 29 may if desired be bent at an angle to the bottom surface of the receiver member so as to provide hook like members. In either case the members will by reason of their small diameters easily pierce the cords. The use of fine wire piercing members serves to facilitate the manufacture of the device since the number of parts as compared to prior devices, has been greatly reduced.

The manufacture and assembly of the connector includes the simple operation of punching or otherwise forming a blank 31 (see Fig. 7) from a sheet of metal of suitable thickness. This blank includes a surface area 32' to form bottom wall 18 of receiver member 16. Surface areas 33 and 34 form side walls 19 and 20 respectively of the receiver member. The surface 32' is, however, extended to provide a tongue 35 spaced from extensions 36 and 37 which subsequently constitute ears 21 and 22 respectively.

As shown, the blank 31 is provided with holes 38 and 39 and notches 41 and 42 to receive a U-shaped member 43 (see Fig. 3) formed of the wire above described having its end terminating in sections bent at right angles to the legs of the U and constituting the piercing members 28 and 29. The parts are assembled by simply inserting the ends of the U-shaped wire through the holes 38 and 39 to bring the elbow 44 of the U across the said holes on the normal outer side of the blank. The tongue 35 is then folded over and the notches 41 and 42 engage the legs of the U-shaped member 43 and serve as spacing means so that when the tongue is folded tight against the bottom wall 18 of the receiver 16 the piercing elements 28 and 29 are rigidly held in position. The surfaces 33 and 34 may then be bent to provide the side walls 19 and 20 of the receiver and the extensions shaped to provide ears 21 and 22 as shown in Fig. 2.

Although the method of assembly or manufacture of the receiver has been described as first bending the tongue to clamp the U-shaped member it is obvious that if desirable the side walls may first be bent to shape.

The simplicity and utility of the present device is attained by the novel structure which makes it possible to actually pierce the cord ends with a minimum amount of effort and to attain this desired result in a practical and economic manner.

Although a preferred embodiment of the invention is shown and described herein it is to be understood that modifications may be made therein without departing from the spirit and scope of the invention as set forth in the appended claims.

What is claimed is:

1. A connector for a flexible cord comprising a metallic trough shaped member to receive the ends of a cord, one end of the bottom wall of said member having an extended portion reversely bent to extend between the side walls of said member, said extension having a pair of spaced apertures, a wire U-shaped element having the legs thereof disposed in said apertures and the ends of said legs bent to extend upwardly from said bottom wall to pierce a cord when disposed in said trough shaped member and a cover member hingedly connected to one end of said trough shaped member for movement to cooperate with said wire element to hold said cord ends and means for locking said cover member in fixed relation to said trough shaped member.

2. A connector for a flexible cord comprising a trough shaped sheet metal member to receive the ends of a cord, a U-shaped wire element disposed on the bottom wall of said member and having end portions bent at right angles to the surface of said bottom wall to pierce said cord when disposed in said member, a tongue extend-

ing from one end of the bottom wall of said member, said tongue having spaced apertures through which the arms of said U-shaped element extend, said tongue being reversely bent over the elbow of said U-shaped element to hold said element in said member and a hinged cover for holding said cord ends on said bent end portions of said element.

3. A connector for a flexible cord comprising a trough shaped sheet metal member to receive the ends of a cord, a tongue extending from one end of said member and reversely bent to extend along the bottom wall of said member, said tongue having a pair of spaced apertures, a U-shaped wire element having the arms thereof extending through said apertures and disposed along the bottom wall of said member, said element having the ends of its arms bent at right angles to said bottom wall to pierce cord ends when disposed in said member and a hinged cover member for holding said cord ends against displacement.

EMIL EUGEN FACHON.

REFERENCES CITED

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

FOREIGN PATENTS

Number	Country	Date
351,976	Germany	Apr. 20, 1922
621,860	France	May 19, 1927
650,537	France	Jan. 10, 1929