

April 16, 1929.

E. SPEIDEL

1,709,198

ELASTIC MEMBER

Original Filed March 30, 1927

Fig. 1.

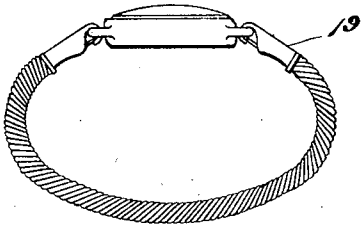


Fig. 2.



Fig. 3.

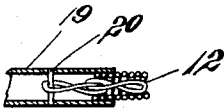
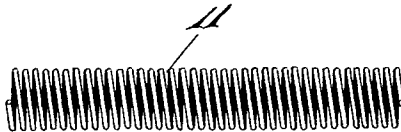


Fig. 8.

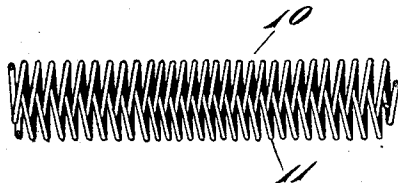


Fig. 4.

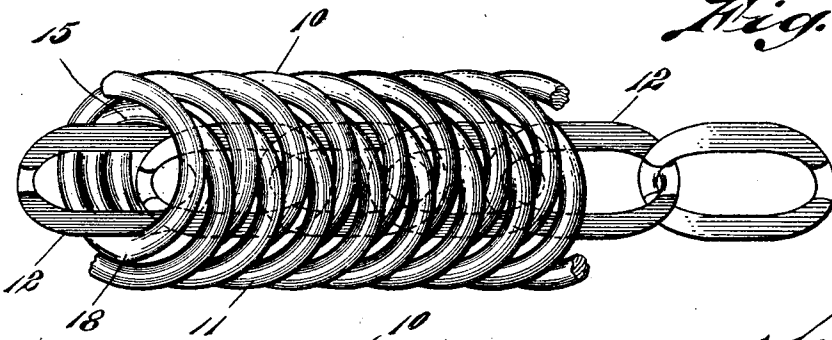


Fig. 5.

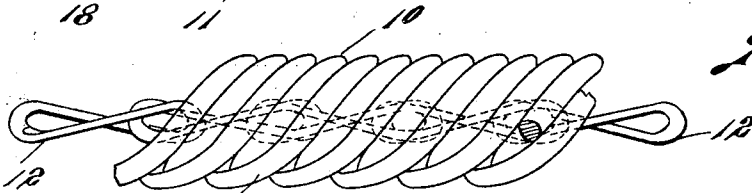


Fig. 6.

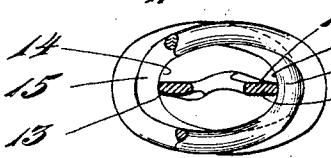


Fig. 7.

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UNITED STATES PATENT OFFICE.

EUGEN SPEIDEL, OF PFORZHEIM, GERMANY, ASSIGNOR TO FR. SPEIDEL, OF PROVIDENCE, RHODE ISLAND, A FIRM COMPRISING THE FOLLOWING MEMBERS, FREDERICK SPEIDEL AND EUGEN SPEIDEL.

ELASTIC MEMBER.

Continuation of application Serial No. 179,585, filed March 30, 1927, Patent No. 1,647,060, dated October 25, 1927. This application filed June 30, 1927. Serial No. 202,701.

This invention relates to an improved construction of an elastic member more particularly adapted for use as an extendible bracelet, garter, neck band or the like and is a continuation of my co-pending application, Serial No. 179,585, filed March 30, 1927, patented October 25, 1927, No. 1,647,060; and the object of this invention is to construct such an elastic member of coils of wire having their convolutions intermeshing one with the other along their length and to position a core or middle member in the coils to retain them in interengaging relation.

A further object of the invention is to form these helical coils of a right and left hand pitch and cause the coils or convolutions to intermesh one with the other whereby the coils serve to support each other and to provide a flexible core of suitable material and construction in the coils to prevent them from lateral displacement.

A further object of the invention is to extend a core through the coils to maintain them in intermeshed relation and limit the extension of the elastic coil member.

The invention further consists in tipping the coils so that each will lie in a plane at an angle to their axes whereby the coils overly each other in the manner of fish scales.

Further, it is found of advantage to form the core or locking member of chain, the links of which engage the opposite inner edges of the adjacent intermeshing coils to lock them in alignment and also to limit the extension or stretch of the device.

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:

Figure 1 is a side elevation illustrating my improved elastic member in bracelet form with its ends attached to opposite sides of a wrist watch.

Figure 2 is a short length of a left hand helical coil.

Figure 3 is a corresponding length of a right hand helical coil.

Figure 4 shows these right and left hand helical coils as intermeshing one with the other.

Figure 5 is an enlarged view showing the coils as having been tipped to overlie each other similar to the scales of a fish with a core inserted therethrough formed of chain links.

Figure 6 is a side elevation of the intermeshing coils illustrated in Figure 5 showing these coils as being set so that each will lie in a plane at an angle to their axes to overly each other in the manner of fish scales.

Figure 7 is an end view of the intermeshing coils with a chain as a core extending through and engaging the opposite inner edges of the adjacent coils to maintain them in intermeshing relation.

Fig. 8 is a detail view showing the manner in which the coils are attached to the clasps.

It is found of advantage in the construction of elastic members of this character more particularly for use in the construction of extendible bracelets, garters, neck bands or the like, of advantage to form such a band or member that will be readily extendible and with sufficient extension when used as a bracelet to readily pass over the hand of the wearer and at the same time form a bracelet which is handsome and attractive in appearance and also one that is extremely simple and inexpensive in construction, the same being made by simply winding helical coils of wire preferably of the right and left hand coils and intermeshing these coils one with the other along their length, these coils being locked together against lateral disengagement by positioning a suitable core in the coils which will engage the opposite inner edges of the adjacent coils to lock them against such lateral displacement; also to provide the core of such a construction that it will limit the extendibility of the bracelet so that the helical coils cannot be strained

and disrupted sufficiently to prevent them from returning when released to their closely coiled formation and so prevent injury thereto; and the following is a detailed description of one means by which these advantageous results may be accomplished:—

With reference to the drawings, 10 designates a short length of the left hand helical wire coil which may be made of any desired length and preferably made of a resilient wire of the desired gage and wound into coils of the desired diameter and 11 designates the right hand coil which is preferably made of similarly sized wire but which may be of a wire of another color or character if desired.

In assembling these two coils to form an elastic member, I place them side by side and by tensioning the coils slightly to separate them the convolutions of one are slipped between those of the other and the two coils are so connected together. In this way the convolutions of the opposite coil members serve to assist in supporting each other.

In order to maintain these coils in intermeshing relation I extend the core 12 through the center of these intermeshing coils which may be of any suitable material to lock the coils against relative lateral displacement. This core is preferably flexible so as to permit free bending action of the coils and is preferably connected to the opposite ends of the coils in such a way as to permit but yet limit the extension of the elastic member and so prevent the coils from becoming ruptured or opened up sufficiently to prevent them from returning to closed position when released. To accomplish this in a simple and effective way I preferably employ a metal chain, the links of which are preferably rolled flat as best illustrated in Figure 7 wherein the edge 13 of a link engages the inner edge 14 of a convolution of the left hand helix 15 and the opposite edge 16 of the link engages the opposite inner edge 17 of the convolution 18 whereby these coils are permitted free endwise extension but prevented from relative lateral disengaging movement thereby retaining them in the desired alignment one with the other; also this chain by attaching it to the opposite ends of the coils or to other members adjacent the opposite ends of the combination coil the extension of the coil is limited and the device is protected against being ruptured by undue extension.

It is also found of particular advantage in order to enhance the appearance of the combination coil as a bracelet or ornamental member to pass the coil through a set of rolls or dies and so tip them over at an angle as best illustrated in Figures 5 and 6 and in some cases to present the appearance of being flattened or ornamented on their top and bottom surfaces and also presenting a softer

feel to the arm of the wearer. It may also be noted that in some instances a cap or closure element 19 may serve as a hook or attaching device to receive the opposite ends of the bracelet coils and also this cap member in some instances may provide an anchor for the ends of the chain 12 by passing a locking pin 20 therethrough and so limit the extending length of the elastic band and also serve to protect the elastic member against deformation by pressure exerted against it from the outer sides thereof.

The foregoing description is directed solely towards the construction illustrated, but I desire it to be understood that I reserve the privilege of resorting to all the mechanical changes to which the device is susceptible, the invention being defined and limited only by the terms of the appended claims.

I claim:

1. An elastic member comprising two lengths of helical coils of wire intermeshing one with the other along their length with the axis of one coil parallel to and spaced from the axis of the other coil, and a flexible core in said coils maintaining them in intermeshing relation.
2. An elastic member comprising lengths of right and left hand helical coils of wire intermeshing along their length and a flexible core in said coils maintaining them in intermeshing relation.
3. An elastic member comprising lengths of right and left hand intermeshing helical coils of wire and a flexible core in said coils maintaining them in intermeshing relation, said core also being arranged to limit the endwise extension of said coil members.
4. An elastic member comprising lengths of right and left hand helical coils of wire having their convolutions intermeshing with each other along their length, and a core extending through said coils maintaining them in intermeshing relation.
5. An elastic member comprising lengths of right and left hand helical coils of wire having their convolutions intermeshing with each other along their length and a core extending through said coils maintaining them in intermeshing relation, said core being also arranged to limit the extension of said coil members.
6. An elastic band comprising lengths of right and left hand helical coils of wire, the convolutions of said coils interengaging one with the other along their length, a member extending through said coils maintaining them in interengaging relation and arranged to limit their extension and connecting means on the ends of said band.
7. An elastic member comprising lengths of right and left hand helical coils intermeshing one with the other along their length the convolutions of said coils being set on an incline to overly each other, and

means for maintaining said coils in inter-
meshing relation.

8. An elastic band comprising lengths of
right and left hand helical coils arranged
5 with their convolutions intermeshing with
each other along their length, said convolu-
tions being inclined relative to their axes to
overlie each other and a chain extending

through the convolutions the links of which
engage the opposite sides of the alternate 10
convolutions to retain them in operative
alignment, said chain also serving to limit
the extension of the band.

In testimony whereof I affix my signature.

EUGEN SPEIDEL.