July 28, 1959 E. RODRIGUEZ 2,896,289

BRACELET END ATTACHMENT

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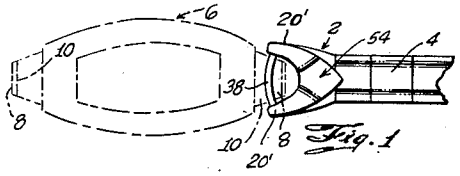


Fig. 1

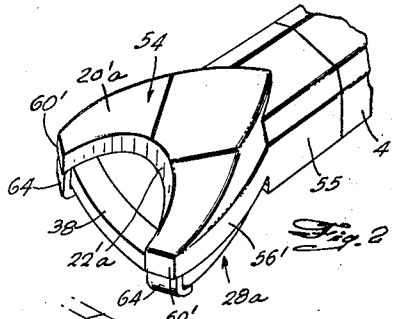


Fig. 2

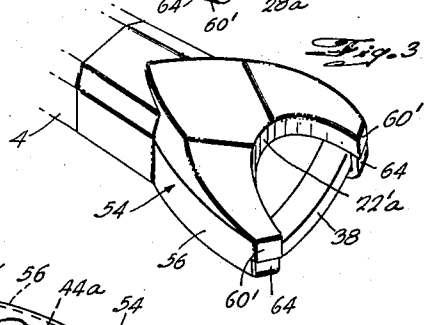


Fig. 3

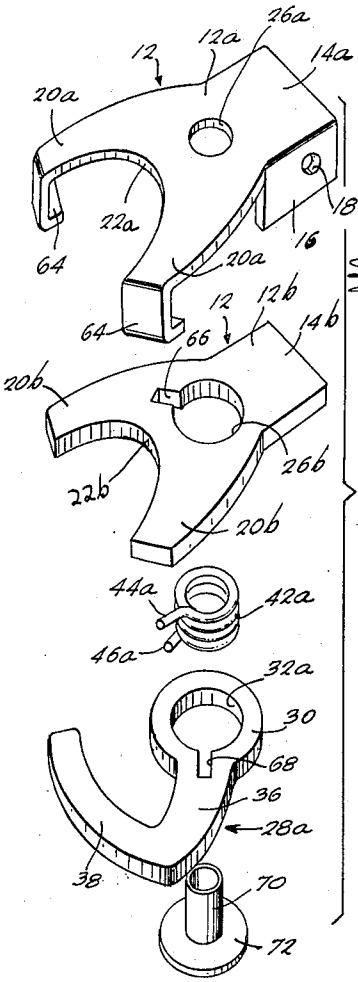


Fig. 4

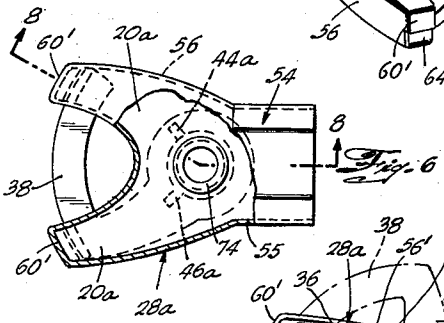


Fig. 6

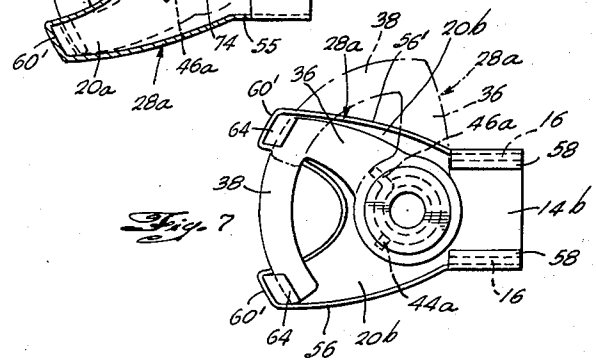


Fig. 7

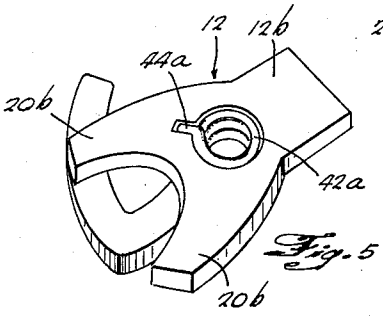


Fig. 5

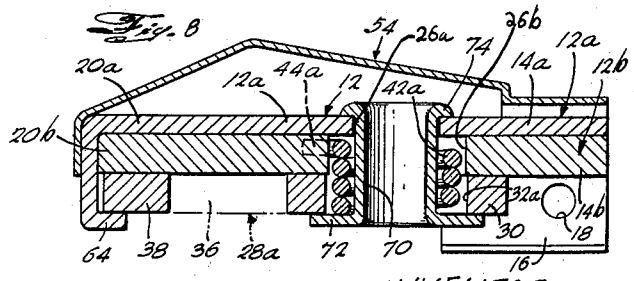


Fig. 8

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BRACELET END ATTACHMENT

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Application January 21, 1955, Serial No. 483,252

14 Claims. (Cl. 24—235)

The present invention relates to an attachment adapted to be secured to the end of a bracelet or the like and to fasten that bracelet to some other object, such as a watch, having a horizontally apertured lug thereon.

Ladies' wrist watches are customarily provided with decorative lugs at each end thereof, those lugs being comparatively narrow, thus conforming to the size of the watch, and having a horizontal aperture through which some fastening element forming a part of a wrist watch bracelet is adapted to pass. Various means have been proposed for securing bracelet ends to these watch lugs. Initially a split ring was used for that purpose. It was, however, not particularly attractive, and it did not permit ready attachment or detachment of the bracelet from the watch. The split ring construction was modified in order to avoid some of these defects, one such construction being shown in Bender Patent 2,266,951 of December 23, 1941, owned by the assignee of this application. Nevertheless, that and similar attaching means left much to be desired, not only with respect to security of attachment and readiness of detachment, but also from the esthetic or decorative point of view.

The development of the art proceeded along two different lines, one typified by Duerr Patent 2,624,092 of January 6, 1953, entitled "End Clasp for a Bracelet or the Like," the other typified by Bender Patent 2,680,274 of June 8,1954, entitled "Wrist Watch Bracelet Connector," both of these patents being owned by the assignee of the instant application.

Functionally the Duerr type of end attachment is exceedingly effective, and is still in widespread use. However it is not quite as effective as might be desired relative to its integration into the decorative scheme of a given bracelet. In addition, although the hooks hug the side of the watch lugs quite snugly, and therefore minimize any visual impression that the bracelet is spaced unduly from the watch, the appearance of such a spacing is often unavoidable, and the fact that the watch and the bracelet are two separate entities is not always sufficiently disguised.

The Bender type of end attachment appears to provide the optimum in attractiveness and in producing a unitary appearance of the watch-bracelet combination, but it has the drawback that the watch and bracelet can be attached to and detached from one another only a very limited number of times, those operations also requiring the use of special tools.

For want of better structures, the art for many years has been using end attachments either of one or the other of the two general types described above, accepting the advantages of each for a given application and putting up with the attendant disadvantages. According to the present invention, however, it is no longer necessary to make such a compromise. The bracelet end attachments here disclosed and claimed permit the designer to impart to the watch case, the end attachment and the bracelet an agreeable conformity of design which leads the eye smoothly and uninterruptedly from the watch

case to the bracelet, thus greatly enhancing the appearance of the ensemble. The bracelet is brought closely and snugly up to the watch case so that there is no visible gap therebetween, thus simulating an appearance of unitary watch-bracelet combinations which are generally considerably more expensive than normal watches to which separate bracelets are attached. The means for fastening the bracelet to the watch is completely hidden from view when the watch and bracelet are fixed to the wrist of the wearer, thus rendering the ensemble wholly non-functional in appearance. The absence of gaps or rings also materially simplifies the problem of cleaning the bracelet and connector since it is not necessary to clean inside restricted openings. These advantages, characteristic of the Bender type of construction set forth above, are accomplished together with a marked gain in the readiness of attachability and detachability, those operations being performable without requiring the use of any tools or any mechanical skill and thus eliminating the need to have a jeweler perform such operations. This not only represents a saving in time to the jeweler, but also permits the user of the bracelet to have a plurality of bracelets for a given watch, the user being able himself to change bracelets in order that the selected bracelet might conform to a particular style of dress. The attaching and detaching operations may be performed an almost indefinite number of times without destroying or impairing the security of the attachment of the watch to the bracelet.

Thus the best features of both the Duerr and Bender type of attachments have been incorporated into a single structure.

This has been accomplished by utilizing a closure member which is pivotal about a vertical axis and which is spring urged to its position received within the housing, in which position a finger on the closure member passes through the horizontal aperture in the watch lug, the lug in turn being prevented from escaping from the finger because it is received within an opening in the housing which is spanned by the closure member finger. The finger is, however, manually movable against the action of the spring to a position in which it at least partially extends laterally beyond the housing, the closure member finger then being withdrawn from the housing opening and from the lateral aperture in the watch lug, thus permitting the watch lug to escape from the housing. The action of the spring on the closure member ensures that the bracelet and watch cannot become separated no matter what forces are applied to the watch, nor in what direction those forces are applied, the housing preventing the watch from engaging the closure member in such a way as to move it against the action of the spring.

The structure of the present invention is simple and compact, and may be produced and assembled quite inexpensively.

To the accomplishment of the above, and to such other objects as may hereinafter appear, the present invention relates to the construction of a bracelet end attachment as defined in the appended claims and as described in this specification, taken together with the accompanying drawings, in which:

Fig. 1 is a top plan view of one embodiment of the present invention, showing the manner in which it is adapted to cooperate with a wrist watch;

Fig. 2 is a three-quarter perspective view, on an enlarged scale, of an embodiment of the present invention;

Fig. 3 is a view of the attachment of Fig. 2 taken from the opposite side;

Fig. 4 is an exploded view of the elements of the attachment of Fig. 2;

Fig. 5 is a three-quarter perspective view of the closure member, spring, and lower base plate section assembled together;

Fig. 6 is a top plan view, partially broken away, of the attachment of Fig. 2;

Fig. 7 is a bottom plan view thereof, the closure member being shown in solid lines in its securing position and in broken lines in its releasing position; and

Fig. 8 is a cross sectional view taken along the line 8—8 of Fig. 6.

The attachment of the present invention, generally designated **2**, is secured to the end of a bracelet **4**. The attachment **2** is adapted to be used in conjunction with a wrist watch generally designated **6** having lugs or bails **8** at the ends thereof, horizontal apertures **10** passing through the lugs or bails **8**.

The end attachment **2** comprises a base generally designated **12** formed of two sections **12***a* and **12***b*, the latter being positioned directly under the former. The sections **12***a* and **12***b* have rearwardly extending portions **14***a* and **14***b* respectively, the former having downwardly depending flanges **16** between which the portion **14***b* is received. The flanges **16** are apertured at **18** so as to permit the base **12** to be secured to the end of the bracelet proper **4**. The forwardly extending portions of the base sections **12***a* and **12***b* are provided with a pair of laterally spaced end portions **20***a* and **20***b* respectively separated by openings **22***a* and **22***b* respectively. The end portions **20***a* of the upper base plate section **12***a* are provided at their tips with reversely bent and downwardly extending hooked portions **64**. The laterally spaced end portions **20***b* of the lower base plate section **12***b* are received directly under the corresponding end portions **20***a* of the upper section **12***a*, the hooked portion **64** extending below the end portions **20***b*. The upper base section **12***a* is provided with an aperture **26***a* and the lower base section **12***b* is provided with an aperture **26***b*, the latter being coaxial with the former but having a greater diameter. A slot **66** extends outwardly from the inner surface of the aperture **26***b*.

The closure member **28***a* comprises a hub **30** centrally apertured at **32***a*, a portion **36** connecting the hub **30***a* to an arcuate finger **38** the curvature of which is substantially concentric with the aperture **32***a*. The aperture **32***a* is coaxial with and of substantially the same size as the aperture **26***b*, and a slot **68** extends outwardly from the inner surface of the aperture **32***a*. The thickness of the finger **38** is substantially equal to the distance that the hook portions **64** extend below the end portions **20***b*. A coil spring **42***a* is received partially within the aperture **32***a* in the closure member **28***a* and partially within the aperture **26***b* in the base section **12***b*, the upper spring end **44***a* being received within the slot **66** and the lower spring end **46***a* being received within the slot **68**. As may best be seen from Figs. 5–8, the spring **42***a* is of such a height as to be substantially completely received within the registering apertures **32***a* and **26***b* when the closure member **28***a* is positioned directly under the lower base section **12***b*. The base sections **12***a* and **12***b* and the closure member **28***a* are held together by means of a rivet or eyelet **70** the shank of which is passable through the interior of the coil spring **42***a*, the eyelet head **72** underlying and supporting the closure member **28***a*, the upper tip of the eyelet **70** being spun over at **74** in order to hold the parts assembled. As may be seen from Fig. 5, the spring **42***a* is so biased as to tend to cause the tip of the finger **38** to pass beyond the end portion **20***b* toward which it extends.

An ornamental shell **54** conforms to the configuration of the base **12** and is secured thereto in conventional manner, as by having the depending side flanges **55** of the rear portion of the shell **54** bent around the undersurfaces of the flanges **16** on the base portion **14***a*, as at **58** (see Fig. 7). The upper surface of the shell **54**, which is preferably raised above the base plate **12**, may

be ornamented or shaped in any desired fashion. The shell **54** has laterally spaced end portions **20'***a* separated by an opening **22'***a*. The outer side flange **56** on that one of the shell end portions **20'***a* toward which the finger **38** is directed extends downwardly into the path of the finger **38** (see Fig. 3). The shell outer side flange **56'** on the other side of the attachment (see Fig. 2) terminates at a point above the closure member **28***a* so as not to interfere with movement thereof.

The spring **42***a* is so biased that the closure member **28***a* tends to pivot in a clockwise direction with respect to the base **12**, as viewed in Fig. 5, to the position shown. However, the lateral shell flange **56** will be engaged by the tip of the finger **38** before the closure member **28***a* can assume the spring-urged position shown in Fig. 5, thus ensuring that the closure member 28a will always be spring-biased to its securing position. The finger **38** will span the space between the tips of the end portions **20***a* and **20***b*, the closure member **28***a* pivoting in this spring-urged direction until the tip of the finger **38** engages the shell flange **56**. When the closure member **28***a* is in this position, hereinafter termed its securing position, the only part of it which is visible from above is the finger **38**, that finger having a length sufficient to completely span the opening **22'***a* at the widest part thereof. When the closure member **28***a* is in this securing position, the finger **38**, as may best be seen from Fig. 1, will have passed through the lateral aperture **10** in the watch lug **8** which has previously been inserted into the opening **22'***a*. As a result the bracelet **4** will be attached to the watch **6**.

When it is desired to detach the watch **6** from the bracelet **4**, the closure member **28***a* is engaged from below and manually swung to its position shown in broken lines in Fig. 7 against the action of the spring **42***a*. This movement of the closure member **28***a* is permitted because the side flange **56'** of the shell **54**, located on the side of the attachment beyond which the portions of the closure member **28***a* move when the member **28** is thus positioned, does not interfere with such movement. In this position, the finger **38** will have been completely or substantially completely withdrawn laterally from the opening **22'***a*, and will therefore have been withdrawn from the horizontal aperture **10** in the watch lug **8**. The lug **8** can therefore be removed from the attachment **2**. It will be appreciated that this same "releasing" position of the closure member **28***a* must be attained before the attachment **2** can again be secured to a watch lug **8**, it being necessary to withdraw the finger **38** from the opening **22'***a* in order to permit the watch lug **8** to enter that opening, release of the closure member **28***a* then permitting the spring **42***a* to move the member **28'***a* its securing position, with the finger **38** passing through the lug aperture **10**.

When the bracelet **4** and watch **6** are secured together, it will be apparent that the reliability of the attachment is extremely great. Any tendency of the watch **6** to rise or fall with respect to the bracelet **4** will be resisted by the rigidity of the finger **38**, the attachment of the closure member **28***a* to the base **12**, the upward support afforded the finger **38** by the shell end portions **20'***a* and the base portions **20***a* and **20***b*, and the downward support afforded the finger **38** by the relatively substantial bent over portions **64**. Lateral movement of the watch **6** relative to the bracelet **4** will be limited by engagement of the watch lug **8** with the inner surfaces of the opening **22'***a*, lateral pressures by the watch **6** on the closure member **28***a* being effectively prevented thereby. Consequently any dislocative forces to which the watch-bracelet combination might be expected to be subjected will be contained in a fully effective manner. At the same time the watch **6** may be separated from the bracelet **4** very readily, and without distortion of any structural member except the spring **42**, which is specially designed to withstand such distortion. As a result the closure

member **28***a* may be moved from securing to releasing position, and back again an almost indefinite number of times without detracting from the reliability of action of the end attachment.

It will be noted that the spring **42***a* is housed in a very reliable manner, being prevented from moving upwardly by means of the upper base plate section **12***a* and being prevented from moving downwardly by the head **72** of the rivet or eyelet **70**. These same elements serve to retain the spring ends **44***a* and **46***a* in the slots **66** and **68** respectively. The flat sheet nature of the closure member **28***a* further facilitates manufacture.

While only two specific embodiments have been here disclosed, it will be apparent that many variations may be made therein all within the spirit of the invention as defined in the following claims.

I claim:

1. An end attachment for a bracelet or the like comprising a body having a pair of laterally spaced end portions with an opening therebetween, said body comprising a base and a shell secured to said base, said shell comprising a top wall extending over said base, a closure member articulately mounted on said base and having a finger projecting laterally therefrom, extending across said opening adjacent the tips of said body end portions for one position of said closure member and being laterally withdrawn from said opening for another position of said closure member, resilient means operatively connected between said body and said closure member and urging said closure member to said one position, said base comprising two overlying sections with registering vertical apertures therethrough, the aperture in the lower section being larger than that in the upper section and having a slot extending outwardly from the inner surface thereof, said closure member being pivotally mounted on said base by an element received substantially snugly in the aperture in said upper section but having a clearance from the aperture in said lower section, said resilient means comprising a coil spring at least partially received in said clearance between said element and the inner surface of the aperture in said lower section, one end of said spring being received within said outwardly extending slot so as to be operatively connected to said base, the other end of said spring being operatively connected to said closure member.

2. The end attachment of claim 1, in which said element is secured to said upper base section and extends along the underside of said closure member, thereby retaining said closure member adjacent said base.

3. The end attachment of claim 1, in which one of said base sections has end portions comprising hooks extending partially around and guiding the finger on said closure member.

4. The end attachment of claim 1, in which one of said base sections has end portions comprising hooks extending partially around and guiding the finger on said closure member, and in which said element is secured to said upper base section and extends along the underside of said closure member, thereby retaining said closure member adjacent said base.

5. The end attachment of claim 1, in which the upper of said base plate sections has end portions comprising hooks extending partially around and guiding the fingers on said closure member.

6. The end attachment of claim 1, in which the upper of said base sections has end portions comprising hooks extending partially around and guiding the fingers on said closure member, and in which said element is secured to said upper base section and extends along the underside of said closure member, thereby retaining said closure member adjacent said base.

7. An end attachment for a bracelet or the like comprising a body having a pair of laterally spaced end portions with an opening therebetween, a closure member articulately mounted on said body and having a finger projecting laterally therefrom, extending across said opening adjacent the tips of said body end portions for one position of said closure member and being laterally withdrawn from said opening for another position of said closure member, and resilient means operatively connected between said body and said closure member and urging said closure member to said one position, said body comprising a base on one surface of which said closure member is mounted, and a shell secured to said base, said shell comprising a top wall extending over the opposite surface of said base and a vertical side wall extending vertically beyond said end plate at one side thereof and into the path of the tip of said finger of said closure member, said vertical side wall being on that side of said shell corresponding to the direction in which said finger projects from said closure member and constituting a positive stop for said closure member fixing said one position thereof, said base comprising two overlying sections with registering vertical apertures therethrough, the aperture in the lower section being larger than that in the upper section and having a slot extending outwardly from the inner surface thereof, said closure member being pivotally mounted on said base by an element received substantially snugly in the aperture in said upper section but having a clearance from the aperture in said lower section, said resilient means comprising a coil spring at least partially received in said clearance between said element and the inner surface of the aperture in said lower section, one end of said spring being received within said outwardly extending slot so as to be operatively connected to said base, the other end of said spring being operatively connected to said closure member.

8. An end attachment for a bracelet or the like comprising a body having a pair of laterally spaced end portions with an opening therebetween said body comprising a base and a shell secured to said base, said shell comprising a top wall extending over said base, a closure member articulately mounted on said base and having a finger projecting laterally therefrom, extending across said opening adjacent the tips of said body end portions for one position of said closure member and being laterally withdrawn from said opening for another position of said closure member, resilient means operatively connected between said body and said closure member and urging said closure member to said one position, said base comprising two overlying sections with registering vertical apertures therethrough, the aperture in the lower section being larger than that in the upper section, said closure member being pivotally mounted on said base by an element received substantially snugly in the aperture in said upper section but having a clearance from the aperture in said lower section, said resilient means comprising a coil spring at least partially received in said clearance between said element and the inner surface of the aperture in said lower section, one end of said spring being operatively connected to said closure member.

9. The end attachment of claim 8, in which one of said base sections has end portions comprising hooks extending partially around and guiding the finger on said closure member.

10. The end attachment of claim 8, in which one of said base sections has end portions comprising hooks extending partially around and guiding the finger on said closure member, and in which said element is secured to said upper base section and extends along the underside of said closure member, thereby retaining said closure member adjacent said base.

11. The end attachment of claim 8, in which the upper of said base sections has end portions comprising hooks extending partially around and guiding the fingers on said closure member.

12. The end attachment of claim 8, in which the upper of said base sections has end portions comprising hooks

extending partially around and guiding the fingers on said closure member, and in which said element is secured to said upper base section and extends along the underside of said closure member, thereby retaining said closure member adjacent said base.

13. The end attachment of claim 7, in which one of said base plate sections has end portions comprising hooks extending partially around and guiding the finger on said closure member.

14. The end attachment of claim 7, in which the upper of said base plate sections has end portions comprising hooks extending partially around and guiding the fingers on said closure member.

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