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WRIST WATCH BAND CONNECTOR

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Fig. 1.

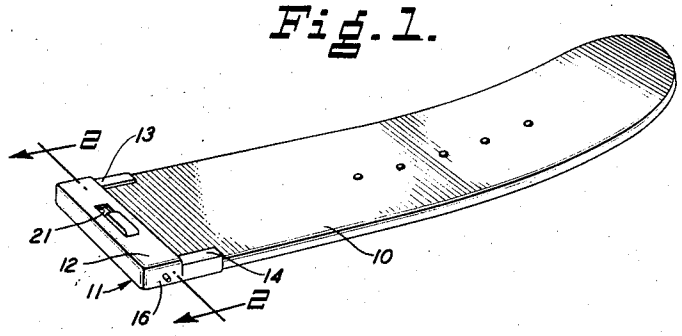


Fig. 2.

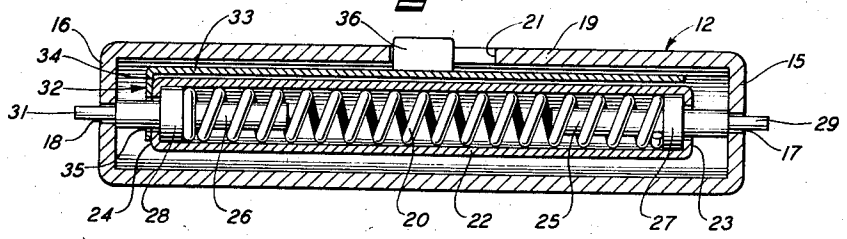
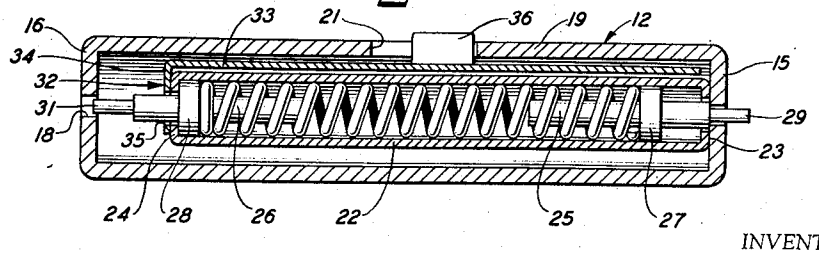


Fig. 3.



INVENTOR.
JOHN F. SAND
BY Arthur L. Nathanson
ATTORNEY

United States Patent Office

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WRIST WATCH BAND CONNECTOR

John F. Sand, Convent Station, N. J., assignor to The Gemex Corporation, Union, N. J., a corporation of New Jersey

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3 Claims. (Cl. 24—265)

The present invention relates to improvements in wrist watch band connectors and more particularly to a novel connector which readily and conveniently connects a wrist watch band to a watch case.

At the present time wrist watch bands are secured to the projecting lugs on a wrist watch by means of a spring bar connector. The connector customarily employed comprises a cylindrical tube within which is mounted a pair of pins that are spring urged outwardly. This type of connector or spring bar has found almost universal acceptance in the field. In positioning the spring bar, it is first inserted through the loop in the end of the watch band or strap. One projecting pin is thereupon inserted in the hole or opening in the lug or projecting portion of the watch case. To insert the other pin in position it is necessary to first retract the pin into its tubular housing. This is customarily done by pushing the end of the pin until it is retracted sufficiently to insert the spring bar in its proper position. The retracted pin then releases to secure the spring bar in position. This operation of inserting the spring bar in position between the lugs or projecting portions of the watch case is a tedious one and is often quite difficult because of the shape and contour of the watch case. In addition the projecting pins are conventionally quite small and difficult to retract. It is to these and other problems of the prior art devices that the present invention is directed.

Accordingly, it is a primary object of the present invention to provide an improved spring bar assembly to secure watch bands and bracelets to watch cases.

Another object of the present invention is to provide a spring bar assembly for watch bands wherein the pins are readily and conveniently retracted.

Another object of the present invention is to provide a spring bar having conveniently retractable pins which is conveniently and economically manufactured.

A further object of the present invention is to provide a device which can be employed with a conventional spring bar for the retraction of the pins thereof.

A further object of the present invention is to provide a novel and improved spring bar retraction device.

In accordance with the above and other objects of the present invention, there is provided an attractive sheet metal housing which is secured to the end of a watch band that is to be attached to a wrist watch case. A spring bar of somewhat conventional construction is located within the housing with its pins projecting through each end thereof. It is contemplated that the conventional spring bar will include a cylindrical tube having a pair of pins projecting from the end thereof and a compression spring urging the pins outwardly. The novel actuating bar of the present invention is L-shaped and has one arm passing over one of the pins of the spring bar. The other longer arm extends parallel with the bar and has a small projection received in a slot in the sheet metal housing. The projection is readily accessible and may be manually operated to retract one pin of

the assembly. Thus the entire assembly is conveniently inserted into position between the projecting lugs of the watch case.

The invention will be more fully understood from the following description of a specific embodiment thereof taken with the drawings in which:

Fig. 1 is a perspective view of a portion of a watch strap having the spring bar assembly of the present invention secured at one end;

Fig. 2 is a sectional view of the spring bar assembly taken on the line 2—2 of Fig. 1; and

Fig. 3 is a sectional view similar to Fig. 2 with the spring bar shown in the retracted position.

Referring now to the drawings, numeral **10** indicates one portion of a watch strap having a spring bar assembly **11** at one end thereof. The assembly comprises a housing **12** which may be conveniently made of sheet metal material. The housing includes a pair of projecting lugs **13** and **14** which are bent over and pressed downward as seen in Fig. 1 so that the assembly **11** is firmly secured to the watch band **10**. The housing is formed with parallel end members **15** and **16** each of which has a small hole **17** and **18** respectively passing therethrough. The top **19** of the housing has a slot **21** for a purpose hereinafter to be described.

A spring bar is located within the housing and includes a cylindrical tube **22** having bent-over ends **23** and **24**. The ends **23** and **24** are spaced a distance less than the distance between the inner surfaces of the end members **15** and **16**. A pair of pins **25** and **26** are located within the cylinder and spring urged outwardly by a compression spring **20**. Each pin **25**, **26** has an enlarged portion **27** and **28** respectively which abuts against the bent-over ends **23** and **24** respectively of the cylindrical tube. Also, the pins **25** and **26** are cut down at their outer ends as at **29** and **31** respectively to provide shoulders that abut against the ends **15** and **16** respectively of the housing **12**. As seen in Figures 2 and 3, the cut down portions **29** and **31** are of a length greater than the difference between the length of the cylindrical tube **22** and the distance between the inner surfaces of the end members **15** and **16**, so that movement of the cylindrical tube within the housing will not result in disengagement of the cut down portions from the holes in the end members with which they are engaged.

An L-shaped actuating bar generally indicated by numeral **32** has a long arm **33** extending parallel with the cylindrical tube **22**, and a shorter arm **34** at right angles thereto. Arm **34** has a hole or opening **35** which receives the projecting end of pin **26**. The actuating bar **32** may be conveniently made of a thin strip of flat sheet metal which is bent over at one end. This actuating bar is then conveniently slipped over the end of a somewhat conventional spring bar of the type shown in Figs. 2 and 3. An important feature of the present invention is that this actuating bar is of simple and economical construction and may be employed with spring bars now commercially available. A finger piece **36** is secured to the upper surface of arm **33** or formed integral therewith and extends through slot **21** in the top of the housing.

In positioning the device between the projecting lugs of a wrist watch case, one pin such as **25** is inserted in the watch case lug (not shown) and the finger piece **36** is moved to the right to retract pin **26** within the sheet metal housing. This position of the device is shown more clearly in Fig. 3 wherein finger piece **36** and actuating bar **32** have been moved to the right. As the bar **32** moves to the right its arm **34** will engage the bent-over end **24** of the cylindrical tube **22**. The tube will thereupon move to the right and by the engagement with the enlarged portion **28** of pin **26**, the latter will thereupon be retracted within the housing **12**. With pin **26**

thus retracted, the assembly may be easily inserted adjacent the other lug of the watch case (not shown) and then released.

It is seen from the above therefore that the present invention contemplates a simple, readily constructed actuating bar which may be employed with the conventional spring bars now in use. Applicant has further provided a housing arrangement which is particularly suited for the spring bar and actuating bar of the present invention.

Although the present invention has been described with respect to a specific embodiment thereof, it is understood that this is not to be considered as limiting the invention as set forth in the appended claims.

What is claimed is:

1. A wristwatch connector of the class described comprising: a housing, means adapted to secure said housing to an end of a watchband, said housing including a side member and a pair of end pieces, there being a hole passing through each of said end pieces there being an opening in said side member; a spring bar disposed within said housing, said spring bar including a cylindrical tube having bent over ends, said ends being spaced a distance apart from each other which is less than the distance between the inwardly disposed surfaces of said end pieces, a pair of pins disposed within said cylindrical tube, and a coil spring disposed within said cylindrical tube, the ends of which bear against an inwardly disposed surface of each of said pins; said pins each having en enlarged portion thereon adapted to bear against one of said bent over ends, and a second cut down portion at the outer end thereof providing a shoulder adapted to abut against the inner surface of an end piece, said cut down portion being adapted to extend through said hole in said end piece; an actuating bar within said housing, said actuating bar having a first arm having a hole therein adapted to receive a portion of one of said pins and bear against one of said bent over ends of said cylindrical tubes, a second arm extending parallel to said cylindrical tube, and means on said second arm extending through said opening in said housing for manual actuation, whereby said cylindrical tube may be axially shifted to retract one of said pins within the hole in the end piece with which it is engaged.

2. A wristwatch connector of the class described comprising: a housing, means adapted to secure said housing to an end of a watchband, said housing including a side member and a pair of end pieces, there being a hole passing through each of said end pieces, there being an opening in said side member; a spring bar disposed within said housing, said spring bar including a cylindrical tube having bent over ends, said ends being spaced a distance apart from each other which is less than the distance between the inwardly disposed surfaces of said end pieces, a pair of pins disposed within said cylindrical tube, and a coil spring disposed within said cylindrical tube, the ends of which bear against an inwardly disposed surface of each of said pins; said pins each having an enlarged portion thereon adapted to bear against one of said bent

over ends, and a second cut down portion at the outer end thereof providing a shoulder adapted to abut against the inner surface of an end piece, said cut down portion being adapted to extend through said hole in said end piece; an actuating bar within said housing, said actuating bar having a first arm having a hole therein adapted to receive a portion of one of said pins and bear against one of said bent over ends of said cylindrical tubes, a second arm extending parallel to said cylindrical tube, and means on said second arm extending through said opening in said housing for manual actuation, whereby said cylindrical tube may be axially shifted to retract one of said pins within the hole in the end piece with which it is engaged; said cut down portions of said pins being of a length greater than the path of travel of said cylindrical member.

3. A wristwatch connector of the class described comprising: a housing, means adapted to secure said housing to an end of a watchband, said housing including a side member and a pair of end pieces, there being a hole passing through each of said end pieces, there being an opening in said side member; a spring bar disposed within said housing, said spring bar including a cylindrical tube having bent over ends, said ends being spaced a distance apart from each other which is less than the distance between the inwardly disposed surfaces of said end pieces, a pair of pins disposed within said cylindrical tube, and a coil spring disposed within said cylindrical tube, the ends of which bear against an inwardly disposed surface of each of said pins; said pins each having an enlarged portion thereon adapted to bear against one of said bent over ends, and a second cut down portion at the outer end thereof providing a shoulder adapted to abut against the inner surface of an end piece, said cut down portion being adapted to extend through said hole in said end piece; an L-shaped actuating bar within said housing, said L-shaped actuating bar having a first arm having a hole therein adapted to receive a portion of one of said pins and bear against one of said bent over ends of said cylindrical tubes, a second arm extending parallel to said cylindrical tube, and means on said second arm extending through said opening in said housing for manual actuation, whereby said cylindrical tube may be axially shifted to retract one of said pins within the hole in the end piece with which it is engaged; said cut down portions of said pins being of a length greater than the path of travel of said cylindrical member.

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