Dec. 26, 1950 B. MILNER 2,536,007

SPRING PLUG FOR WATCH BAND ATTACHMENTS

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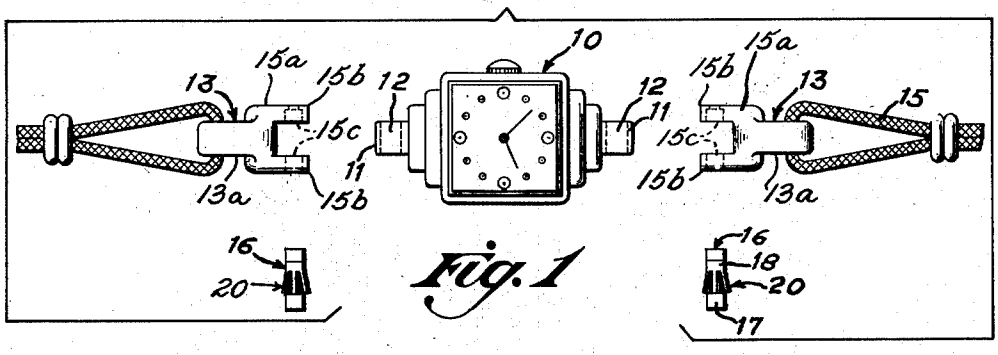


Fig. 1

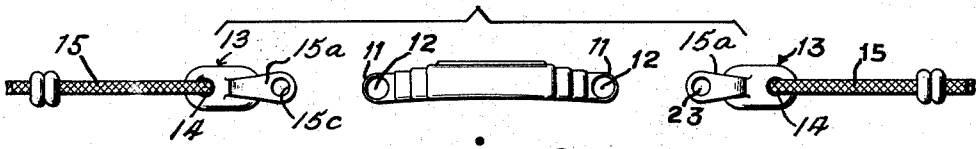


Fig. 2

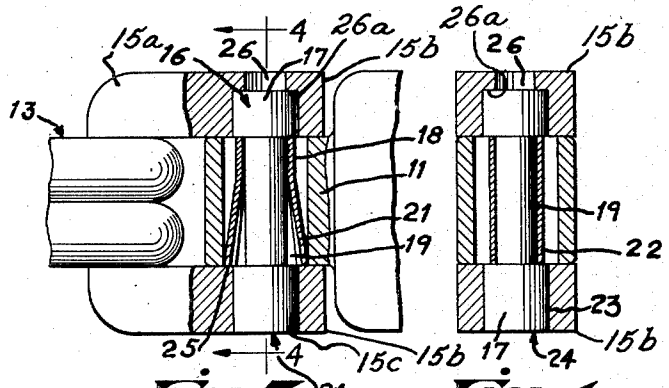


Fig. 3

Fig. 4

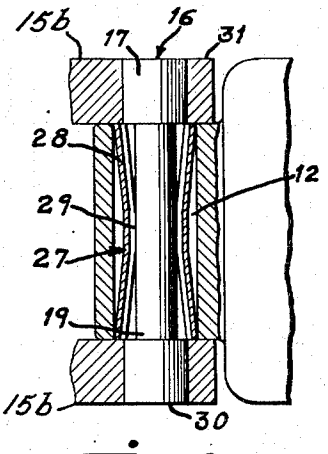


Fig. 6

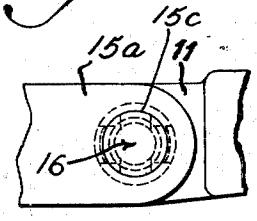


Fig. 5

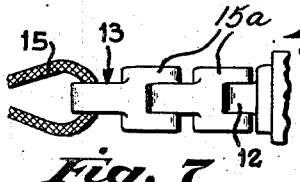


Fig. 7

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SPRING PLUG FOR WATCH BAND ATTACHMENTS

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5 Claims. (Cl. 24—265)

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This invention relates to the jewelry art and is particularly concerned with the attachment of a wrist watch case to a watch end, which is the trade term for decorative elements, designed to be positioned between the watch case and the watch band in a wrist watch assembly.

When positioned on a watch band the conventional wrist watch does not always provide the degree of ornamentation desired. For this reason watch ends are sometimes sold either along with the watch itself or more frequently at a later time when the novelty of the watch has worn off. The addition of watch ends to a wrist watch greatly lengthens the decorative effect of the assembly particularly when the watch ends are jewelled as is usually the case.

The conventional wrist watch case is provided with means for attaching the watch to the band or to the watch end. This usually consists of a pair of extended tongue members or lugs, one on each side of the watch case, in which transverse bores have been formed. The ends of the band are conventionally passed through these bores in the event that a watch end is not included in the combination. Where a watch end is included, it is usual to fasten the watch ends directly to the lugs on the watch case. Watch ends are formed in many different shapes and configurations but in the usual type to which this invention is directed the watch end includes as an integral part a clevis adapted to fit over the lug and to be secured thereto in some manner. Various different methods of securing the watch end to the watch case have been proposed. In some instances, the watch ends have been soldered to the lugs on the watch either directly or by means of a pin passed through a bore in an intervening link. This soldering constitutes a factory operation and when it is the method of attachment selected, it is necessary for the retail jeweler to send the entire assembly to a manufacturing jeweler. This consumes considerable time and adds to the expense of the operation.

Briefly stated, the principal purpose of the present invention has been to provide means for attaching the clevis portion of a watch end to the lugs or a watch case which means is so simple in construction that it can be utilized in a few seconds by the retail jeweler and yet so strong and sure that jewelled watch ends cannot be separated from the watch and thereby lost.

Other and more specific objects and advantages will be apparent from the further and more

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detailed description of a preferred embodiment of the invention as disclosed in the accompanying drawings in which:

Figure 1 is a front elevation of a wrist watch and wrist watch case of conventional construction associated with but separated from an assembly including a watch end having a clevis portion and a wrist watch strap. The spring pins, which form the engagement between the watch end and the wrist watch case, are shown in side elevation directly beneath the bores in which they are inserted.

Figure 2 is a side elevation similar to Figure 1.

Figure 3 is a fragmentary enlarged sectional view illustrating the assembly of the pin, the lug on the watch case and the watch end.

Figure 4 is a sectional view along the line 4—4, Figure 3.

Figure 5 is a side plan view of the assembly as projected from Figure 3.

Figure 6 is a sectional view similar to Figure 3 illustrating a modification of the invention.

Figure 7 is a fragmentary view illustrating several of the watch ends linked together as a train to provide an elongated ornament.

Referring now to Figure 1, a watch and watch case of conventional construction has been indicated generally as 10. This case has a pair of lugs designated 11 protruding outwardly from the ends thereof. Bores 12 have been formed transversely through the lugs. Watch ends of very simple design have been designated generally as 13. These particular watch ends are shown as formed only from precious metal but other materials may be used and in the majority of instances they will be jewelled. Near the outer extremities of the watch ends 13 are outwardly extending portions 13a in which appropriate transverse openings 14 are bored to receive a watch strap or cord 15. The inner portions of the watch ends 13 form clevis portions 15a which form an integral part of the watch ends. The clevis portions 15a include inwardly extending clevis arms 15b through which pass clevis bores 15c for connecting the watch ends 13 to the watch 10.

Directly below the bores in the clevis arms 15b are shown, in their preferred form, the spring pin assemblies 16, which constitute the attaching means of the invention. These pins include pin members 17, which preferably are of dumbbell configuration as shown in Figures 3, 4, and 6, and sleeves 18 which are rolled around the central or indented portions 19 of the pins 17. The sleeves 18 are preferably formed from a gen-

erally rectangular sheet of phosphor bronze or similar ductile metal having spring characteristics. This sheet is slit and configurated to form a plurality of tangs or fingers 20 extending for a substantial distance of its length. One or more of these fingers as 21 are preferably bent outwardly while one or more others as 22 remain parallel with the center line of the pin to engage loosely the indented surface 19 of the pin member 17. The sleeve 18 is longitudinally locked against the indented portion of the pin member 17 by means of the parallel fingers 22 which prevent the sleeve from slipping off the pin.

The details of the construction of the invention are best illustrated in Figures 3 and 4. In these views the pin assembly 16 has been inserted through an opening in the bore 15c in the clevis arm. This bore is preferably made of smaller diameter than the bore 12 on the watch case lug 11. This insertion is accomplished through an end 24 of the bore 15c which opening is of substantially the same diameter as the pin 17. As the pin assembly 16 enters the bore 15c the tangs 21 are first confined but as the assembly passes through the larger bore 12 on the lug 11 they spring outwardly as shown in Figure 3, to engage a shoulder 25 formed between the inner surfaces of the clevis arms 15b and the sides of the bore 12 on the lug. This engagement prevents removal of the pin assembly from the bore after it has been once inserted. As previously stated, the tangs 22 are left parallel to the pin and have the function of holding the sleeve 18 in the indented portion 19 of the pin 17 without other means of attachment.

After the pin assembly 16 has been fully inserted. it will have the appearance indicated in Figures 3 and 4. The small bore 26 in the watch end 13 has no real function but is a necessary incident to the manufacturing process by which these links conventionally are made. However, the shoulder 26a provided by the differences in the diameters of the bores 26 and 15b provides a stop for the pin. Thus, in this embodiment of the invention the shoulder 26a prevents displacement of the pin in the one direction and the tangs prevent displacement in the other direction. The pin is therefore locked permanently in place.

Figure 6 shows a modification of the invention in which a sleeve 27 has tangs designated 28 and structurally similar to the tangs 20 formed at both ends. These tangs are bent outwardly while the central portion 29 of the sleeve is pressed against the central portion of the indented portions 19 of the pin 17. In the use of this modification an engagement is obtained at both ends of the bore 12 instead of at a single end only. As shown in Figure 6 where this modification is used the bore 30 in the watch end, here designated as 31, may be of the same diameter at both ends as the passage of the pin assembly 16 through the bore is effectively prevented by the double lock which is obtained. This construction is particularly adapted to use with a link in which a bore having a diameter continuous as distinguished from a link having a shoulder as shown in Figure 3.

It will be apparent from the preceding description that a very quick and effective means has been provided for forming an attachment between a watch end and a lug on a watch case. Once the engagement has been formed between the tangs 21 and a single shoulder 25, as shown in Figure 3, or the tangs 38 and the double shoulder shown in Figure 6, it is almost impossible to remove the pin assembly. At the same time, the attachment is one which can be effected within a few seconds while the customer is still in the retail store. This is a great commercial advantage because it avoids the necessity of sending the various elements of the assembly to a manufacturing jeweler for soldering. At the same time, the attachment is just as secure as could be attained by soldering. While the invention has been described with particular reference to the attachment of a link to a watch case lug it will be apparent that the utility is not limited to this single purpose and that there are other problems in the jewelry art and in other arts to which the invention has application. The use of a single watch end at either end of a watch has been described. However, additional watch ends may be added to form a train if desired. Thus, an additional watch end can be attached to each of the watch ends 13 by means of the openings 14, as shown in Figure 7, and any desired number of ornamental watch ends can be added serially to the watch 10.

Having described my invention, I claim:

1. Means for attaching the clevis of a watch end ornament and a watch lug having bores formed therein, the bore in the lug having a greater diameter than that in the clevis of the watch end ornament, said means including a pin having a diameter at its ends substantially the same as the diameter of the bore in the clevis and a reduced diameter along its central section, said section being substantially as long as the width of the lug, a sleeve adapted to fit around said pin along its central section and tangs bent outwardly from said sleeve, whereby, as the pin is inserted through the ornament bore, and into the lug the tangs will spring outwardly and engage the shoulder formed between the inner surface of the ornament and the side of the bore in the lug.

2. Means for securing a clevis to the tongue member of a watch end ornament, the clevis having arms with bores therein positioned to be aligned with a bore of large diameter in the tongue member when the tongue is in position between the arms; said means including a pin having a reduced diameter along its central section, said section being substantially as long as the width of the tongue, a sleeve adapted to encircle the pin in the area of its reduced diameter and at least one spring tang extending outwardly from the sleeve, whereby as the pin is inserted through the clevis bore and into the tongue bore the end of the tang will be urged outwardly and into locking engagement with the inner surface of the clevis arms.

3. Means for attaching a wristwatch case having a tongue member extending therefrom to the clevis of a watch end ornament, said tongue member having a bore therein, which is adapted to be aligned with a bore of lesser diameter in the arms of the clevis, the bore of one of the arms of the clevis having an abutment therein; said means including a pin and spring tangs extending outwardly from the sides of said pin, whereby when the pin has been inserted through one arm of the clevis through the tongue and into the bore in the opposite arm of the clevis, the said pin is restrained from movement in one direction by the engagement of its end with the abutment in the bore of the clevis and in the other direction by the locking engagement of said tangs with the inner surface of the clevis.

4. In combination with a watch case having a tongue member thereon, said tongue member having a bore therein and a clevis adapted to be interfitted with said tongue member, said clevis having bores of smaller diameter than the tongue bore, a pin assembly for attaching the watch case to the link, said pin assembly comprising a pin member having a reduced diameter along its central section, a sleeve on said pin in the area of its reduced diameter, said sleeve having spring tangs struck from the surface thereof and extended outwardly therefrom, the ends of said tangs being adapted to engage in locking relationship with the shoulder provided by one of the clevis arms when the pin is in position in the bores of the clevis and tongue.

5. A coupling device for jewelry or the like comprising a clevis member, a tongue adapted to interfit with said clevis member, a clevis pin assembly, said clevis member and tongue having bores therein, the bore in the tongue being of greater diameter than that of the clevis, said bores being adapted to receive said clevis pin assembly to lock the tongue in assembled relationship with the clevis member, said clevis pin assembly including a pin having a reduced diameter along its central section, a sleeve member

fitted around said pin in the area of its reduced diameter and a plurality of spring tangs formed in the sleeve member, certain of said tangs being substantially parallel with the axis of the pin and holding the sleeve to the pin and others of said tangs being bent outwardly to engage the inner surfaces of the clevis member when the clevis pin assembly is in position in the bores of the clevis and the tongue.

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