

[54] END ATTACHMENT FOR WATCH BANDS

1,713,533 5/1929 Jones.....24/265 B
2,883,727 4/1959 Obst.....24/265 B

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[57] ABSTRACT

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An end attachment for watch bands which permits use of a watch band with wrist watches having different spacings between their attachment lugs. The attachment includes a generally tubular insert member which includes at least one outwardly biased, inherently resilient tab, at least one side of the tab comprising a cam surface inclined towards the end of the tab for facilitating insertion of the insert member into and withdrawal of the insert member from a generally tubular end member of the end attachment which has a slot intermediate its ends.

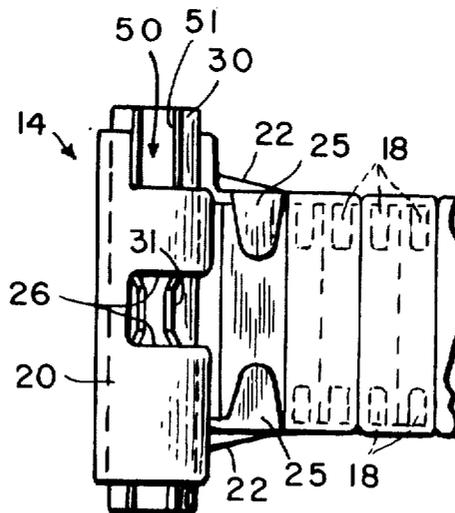
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[51] Int. Cl.....A44c 5/18
[58] Field of Search.....24/265 B; 224/4 D, 4 E;
63/3-5; 58/88 WS

[56] References Cited

UNITED STATES PATENTS

1,447,718 3/1923 Gruen24/265 B

5 Claims, 7 Drawing Figures



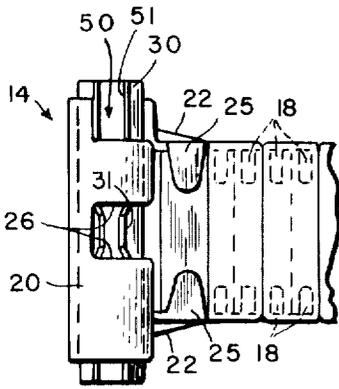
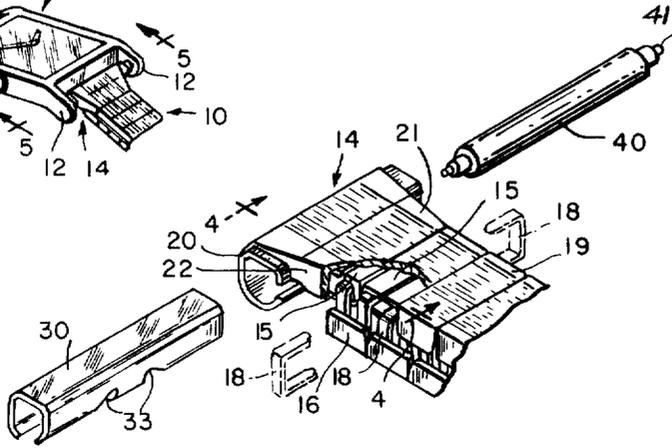
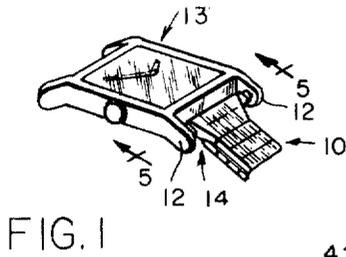


FIG. 2

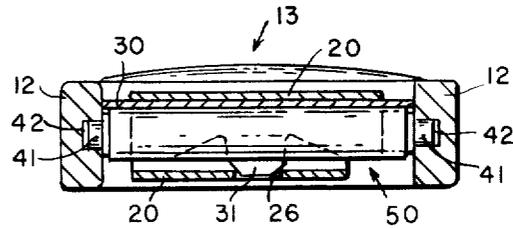


FIG. 3

FIG. 5

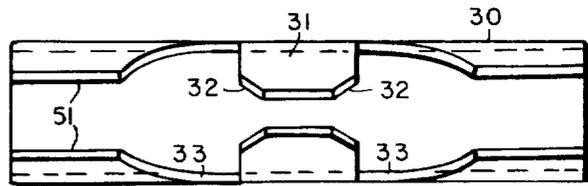
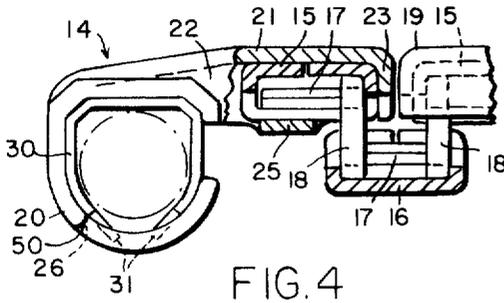


FIG. 4

FIG. 6

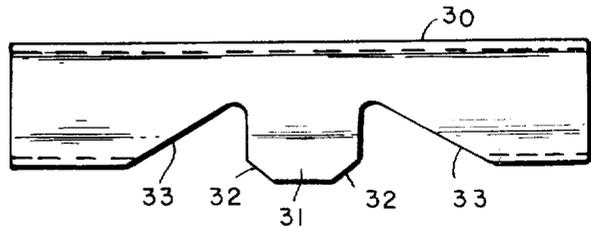


FIG. 7

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END ATTACHMENT FOR WATCH BANDS

BACKGROUND OF THE INVENTION

Many wrist watch cases are provided with two pairs of spaced lugs, one pair at each side of the case for receiving the ends of a watch band. Each end of the watch band is customarily detachably secured between a pair of watch case lugs by a spring bar which is passed through a generally tubular end member of the watch band after which the ends of the spring bar are inserted in cavities of the lugs.

The distances between lugs of watch cases are not uniform, i.e., the distance is greater in one watch than in another and this presents a problem to both the watch band manufacturer and to the retail dealer. It is expensive for a manufacturer to make watch bands which have end attachments of different widths and it is also expensive for a retail dealer to carry an inventory of watch bands having end attachments of different widths.

There have been many proposed solutions of the problem.

One solution has been to provide an insert for the generally tubular end member of the watch band end attachment in which the ends of the insert are urged outwardly by a spring so that by pressing them inwardly to compress the spring, the retail dealer can place the insert between watch case lugs which are spaced varying distances apart. Such end attachments are expensive to manufacture and assemble and careful quality control is necessary by the manufacturer to insure that the spring will not deteriorate in use. An example of this type of end attachment is found in U.S. Pat. No. 2,713,445 dated July 19, 1955 to Speck.

Another proposed solution is to provide a series of outer generally tubular members which are slid over the usual generally tubular end attachment members of the watch band and permanently secured to them. Each outer generally tubular member is considerably longer than the watch band end attachment tubular member and it is provided with two or more spaced score lines at each end so that segments may be removed by the retail dealer to cause it to fit between the lugs of the customer's watch. An example of this type is disclosed in U.S. Pat. No. 3,118,209 dated Jan. 21, 1964 to Vollet. Such end attachments are expensive to manufacture and assemble and they require more of the retail dealer's time to install on the customer's watch than the above-mentioned spring pressed type.

Another proposed solution is for the manufacturer to provide the retail dealer with generally tubular sleeves of different lengths for assembly with the usual generally tubular end attachment members of the watch band by the retail dealer who slides sleeves of the desired length for the customer's watch over the generally tubular parts of the end attachment members of the watch band. Instead of supplying the retail dealer with separate sleeves of different lengths, the retail dealer may stock bracelets having sleeves of different lengths. Such sleeves are expensive to manufacture because they must be impressed with the ornamental design of the links of the watch band with which they are to be used and they involve additional expense and trouble to the retail dealer who must either stock tubular sleeves of different lengths or complete watch bands having sleeves of different lengths attached to them.

One example of this type of end attachment is disclosed in U.S. Pat. No. 2,883,727 dated Apr. 28, 1959 to Obst in which the generally tubular sleeve is attached to the generally tubular end attachment member of the watch band by a tab 28 which is bent inwardly into a slot 27 in the end attachment member. In use of this sleeve, it is difficult for the retail jeweler to get at the tab 28 to bend it outwardly from the slot when it is necessary for him to replace a sleeve with one which is longer or shorter.

Another example of this type of end attachment is disclosed in Rossman U.S. Pat. No. 1,836,772 dated Dec. 15, 1931 in which the sleeve is attached to the generally tubular end attachment member of the watch band by a detent 27 which springs into an opening 28 in the end attachment member. In

use, such a sleeve either is likely to accidentally come off the end attachment member in use or is difficult to remove from it depending upon the resiliencies of the sleeve and the end attachment member.

There has been a recognized long-felt need for an end attachment for watch bands for use in attaching a watch band between attachment lugs of wrist watch cases which is economical to manufacture and assemble, which does not require the retail dealer to stock either watch bands having end attachments of different widths or additional generally tubular members of different widths and which can be quickly and easily adapted by the retail dealer to fit between the lugs of watches which are spaced different distances apart.

BRIEF SUMMARY OF THE INVENTION

One object of this invention is to provide an end attachment for a watch band adapted to be mounted between lugs of wrist watch cases which are spaced different distances apart and which is economical to manufacture and assemble.

Another object is to provide such an end attachment which requires only one part in addition to the customary ornamental end attachment of the watch band.

A further object is to provide such an end attachment which does not require the retail dealer to stock watch bands which have end attachments of different widths or additional generally tubular members of different widths for use with end attachment members of shorter widths.

A still further object is to provide such an end attachment in which the adjustable element is held securely in place within the customary end attachment member but which may be removed quickly and easily by the retail dealer to permit the end attachment to be used between watch case lugs which are spaced apart smaller distances.

Still another object is to provide such an end attachment which does not require the use of springs.

Further objects and advantages of the invention will be apparent to persons skilled in the art from the following description taken in conjunction with the accompanying drawings.

In general, the end attachment of this invention includes an end attachment member having a plate like member, the upper surface of which forms a continuation of the ornamental surface of the links of the watch band and which includes a generally tubular end member at its outer end. The end attachment also includes a generally tubular insert member disposed within the generally tubular member of the plate member but which is longer. It also includes means for connecting the plate-like member to the end link of the watch band.

The generally tubular insert member includes at least one outwardly biased, inherently resilient tab intermediate its ends and the generally tubular end member includes a slot intermediate its ends which is adapted to receive the tab.

To assemble the end attachment, the generally tubular insert member is slid axially into the generally tubular end member and when the cam surface of the tab engages the end of the tubular end member, the inherently resilient tab is moved inwardly towards the axis of the generally tubular insert permitting the insert to be moved further into the generally tubular end member. When the tab reaches the slot, it springs outwardly into the slot and thereafter coacts with the sides of the slot to hold the insert member in its centered position relative to the generally tubular end member.

To attach the watch band to a wrist watch, a conventional wrist watch spring bar is inserted axially into the insert and its tips are inserted in the cavities of the watch case lugs.

When the insert is too long to fit between the lugs of the customer's watch, it may be easily removed by pushing on one end of the insert. The cam surface of the tab which is at the side of the tab towards the direction of the desired axial movement of the insert engages the adjacent side of the slot and causes the inherently resilient tab to move inwardly towards the axis of the insert and out of the slot. Thereafter, it is a sim-

ple matter for the insert to be completely withdrawn from the tubular end member.

The ends of the watch band are then attached to the watch by inserting the spring bar 40 into the tubular end member and its tips into the cavities of the lugs.

If it is desired to use the watch band with lugs which are spaced apart distances intermediate the lengths of the insert and of the tubular end member, the ends of the insert may be filed to shorten it sufficiently to fit the space between the lugs.

In the preferred embodiment, the insert member comprises a longitudinal slot, a first outwardly biased, inherently resilient tab extending from one side of this slot towards its centerline, a second outwardly biased, inherently resilient tab extending from the other side of said slot towards the first tab with at least one of the sides of each tab formed with a cam surface which is inclined towards the end of the tab, whereby the insert member is retained within the generally tubular end member by coaction between the tabs and the sides of the slot in the tubular end member. The insert may be removed by pushing the insert member axially in one direction, whereupon action of the cam surfaces of the tabs against the adjacent side of the slot in the generally tubular end member causes the ends of the outwardly biased tabs to be moved inwardly of the tubular insert member out of the slot, freeing the inset member for further axial movement.

In a still further preferred embodiment, a second cam surface is provided on the opposite side of each of the tabs from the first cam surface.

In another preferred embodiment, the tubular insert member is provided with a slot extending inwardly from one end for use in removing the spring bar of the watch and the tubular end member is provided with a wider slot extending inwardly from the same end and at least partially registering with the aforesaid slot of the insert member for use in removing the inset member from the generally tubular end member by use of an instrument pushing against the end of the insert member.

It will be apparent to persons skilled in the art that this invention has solved the recognized long felt need for an end attachment for watch bands for use in attaching a watch band between attachment lugs of wrist watch cases which is economical to manufacture and assemble, which does not require the retail dealer to stock either watch bands having end attachments of different widths or additional generally tubular members of different widths but which can be quickly and easily adapted by the retail dealer to fit between the lugs of watch cases which are spaced difference distances apart.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of a watch, an end attachment embodying the present invention and one end of a watch band;

FIG. 2 is a perspective view of a spring bar of a wrist watch, the parts of the end attachment and a watch band in partially disassembled relationship with parts broken away and two of the link connecting means of the watch band shown in dot dash;

FIG. 3 is a plan view looking at the bottom of the end attachment and two bottom links of the watch band;

FIG. 4 is an enlarged side elevational view of the end attachment and end links of the watch band, parts being broken away and shown in section on the line 4-4 of FIG. 2;

FIG. 5 is an enlarged sectional view taken on the line 5-5 of FIG. 1;

FIG. 6 is an enlarged plan view looking at the bottom of the tubular insert member; and

FIG. 7 is an enlarged side elevational view of the insert member.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

The end attachment for watch bands embodying this invention is adapted to be connected to any conventional wrist watch having two pairs of laterally spaced lugs.

Referring to FIG. 1, 10 designates an expansion watch band secured between the spaced lugs 12 of the watch 13 by the end attachment 14.

While the end attachment is adapted to be used with any conventional watch band, it is shown attached to an expansion watch band of the type shown in the U.S. Pat. No. 3,307,348 to Vanover although the watch band shown in the present application utilizes only one spring in each link. Such a watch band comprises a row of top links 15 and a row of bottom links 16, each link extending in a direction generally transverse to the length of the linkage. There is a leaf spring 17 located in each link and the links are held together by U-shaped connecting members 18 having their legs positioned between the ends of the springs and the outer walls of the top and bottom links respectively, thus to provide an expansible linkage. The watch band is completed by securing ornamental top shells 19 to the top links.

The end attachment 14 of this invention comprises a generally tubular end member 20 which is integral with the plate member 21. The plate member 21 is provided with an end flange 23 and side flanges 22, whereby the end top link 15 of the watchband is received in the space between the flanges and it is retained there by the inwardly bent tabs 25 (FIGS. 3 and 4). The two end U-shaped connecting members 18 secure the end top link to the end bottom link of the watch band.

The top surface of the plate member 21 is provided with a continuation of the ornamental design of the top shells.

The generally tubular end member is provided with slot 26 (FIGS. 3 and 5) intermediate its ends for a purpose which is about to be described.

The end attachment also comprises a generally tubular insert member 30 which is provided with a pair of outwardly biased, inherently resilient tabs 31, the ends of which comprise cam surfaces 32 inclined towards the ends of the tabs. The longitudinal resilience of the tabs is enhanced by the cutout sections 33 at opposite sides of each tab.

As shown in FIG. 5, the generally tubular insert 30 is longer than the generally tubular end member 20.

To assemble the end attachment, the generally tubular insert member is slid axially into the generally tubular end member. When the cam surfaces of the tabs 31 engage the end of the tubular end member 20, the outwardly biased inherently resilient tabs are moved inwardly towards the axis of the generally tubular insert permitting the insert to be moved further into the generally tubular end member. When the tabs reach the slot 26, they spring outwardly into the slot and thereafter they coact with the sides of the slot to hold the insert member in its centered position shown in FIG. 3.

To attach the watch band to a wrist watch, the conventional spring bar 40 is inserted axially in the insert 30 and its tips 41 are inserted in the cavities 42 of the watch lugs 12.

The other end of the watch band then is secured to the two opposite lugs of the watch in the same manner.

When the insert is too long to fit between the lugs of the customer's watch, it may be easily removed by pushing on one end of the inset or by grasping one end with a pair of pliers and pulling it. The cam surfaces 32 of the tabs 31 which are at the sides of the tabs towards the direction of axial movement of the insert engage the adjacent side of the slot 26 and they cause the outwardly biased, inherently resilient tabs to move inwardly towards the axis of the insert and out of the slot. Thereafter it is a simple matter for the insert to be completely withdrawn from the tubular end member either with one's fingers or a pair of pliers.

The ends of the watch band are then attached to the watch by inserting the spring bar 40 into the tubular end member and its tips into the cavities of the lugs.

The slot 50 at one end of the tubular end member and the slot 51 in the insert member provide ready access for removal of the spring bar. The slot 50 is wider than slot 51 and consequently it also provides access to the end of the insert member so the insert member can be pushed further outwardly of the end member with a tool so its end protrudes far enough to be gripped with one's fingers or with a pair of pliers when removing the insert member.

If it is desired to use the watch band with lugs which are spaced apart distances intermediate the lengths of the insert member and of the tubular end member, the ends of the insert may be filed to shorten it sufficiently to fit the space between the lugs.

If desired, only a single tab 31 may be provided for the insert and a cam surface 32 may be provided at only one side of this tab. Furthermore, with the two tab embodiment which is illustrated cam surfaces 32 may be provided at only the sides which are opposite to the slots 50 and 51.

This invention provides an end attachment for watch bands for use in attaching a watch band between attachment lugs of wrist watch cases which is economical to manufacture and assemble, which does not require the retail dealer to stock either watch bands having end attachments of different widths or additional generally tubular members of different widths but which can be quickly and easily adapted by the retail dealer to fit between the lugs of watches which are spaced different distances apart and which can be used with any conventional watch band.

While one desirable embodiment of the invention has been shown in the drawings, it is to be understood that this disclosure is for the purpose of illustration only and various changes in shape, proportion and arrangement of parts as well as the substitution of equivalent elements from those shown and described herein may be made without departing from the spirit and scope of the invention as set forth in the appended claims.

I claim:

1. An end attachment for a watch band adapted to be mounted between spaced lugs of a wrist watch case comprising
 - a generally tubular end member having a slot intermediate its ends and a plate member extending towards the band, means for connecting the plate member to a watch band, and
 - a generally tubular insert member disposed within said tu-

bular end member, said insert member being longer than said tubular end member,

said insert member comprising at least one outwardly biased, inherently resilient tab extending outwardly therefrom into said slot of the tubular end member, at least one of the sides of said tab comprising a cam surface which is inclined towards the end of the tab,

whereby said insert member is detachably retained within said tubular end member by coaction between said tab and the sides of said slot, but it may be removed by moving the insert member axially in one direction, whereupon action of the cam surface of said tab against the adjacent side of said slot causes the end of the outwardly biased tab to be moved inwardly of the tubular insert member and out of the slot, freeing the insert member for further axial movement.

2. An end attachment according to claim 1, wherein a second cam surface is provided on the opposite side of said tab from said first cam surface.

3. An end attachment member according to claim 1, wherein said insert member comprises a longitudinal slot, a first outwardly biased, inherently resilient tab extending from one side of said slot towards its centerline, a second outwardly biased inherently resilient tab extending from the other side of said slot towards the first tab, at least one of the sides of each tab comprising a cam surface which is inclined towards the end of the tab, whereby said insert member is retained within said tubular end member by coaction between said tabs and the sides of the slot in the tubular end member, but it may be removed by moving the insert member axially in one direction, whereupon action of the cam surfaces of said tabs against the adjacent side of the slot in the tubular end member causes the ends of the outwardly biased tabs to be moved inwardly of the tubular insert member out of the slot, freeing the insert member for further axial movement.

4. An end attachment according to claim 3 wherein a second cam surface is provided on the opposite side of each of said tabs from the first cam surface.

5. An end attachment according to claim 1 wherein the tubular insert member is provided with a slot extending inwardly from one end for use in removing a spring pin of a watch and the tubular end member is provided with a wider slot extending inwardly from one end and at least partially registering with the aforesaid slot for use in removing the tubular insert member from the tubular end member.

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