Jan. 28, 1936. F. H. LYNDS 2,028,791

WRIST WATCH BRACELET

Filed Jan. 18, 1935

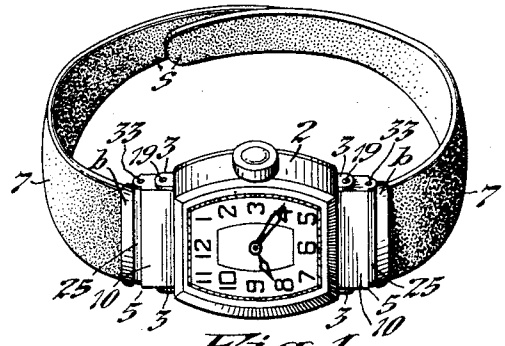


Fig. 1.

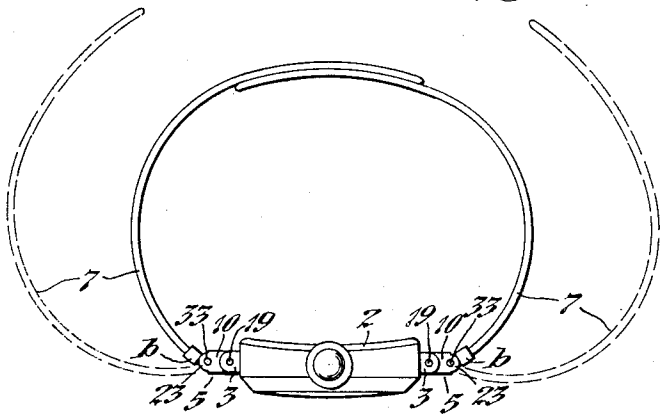


Fig. 2.

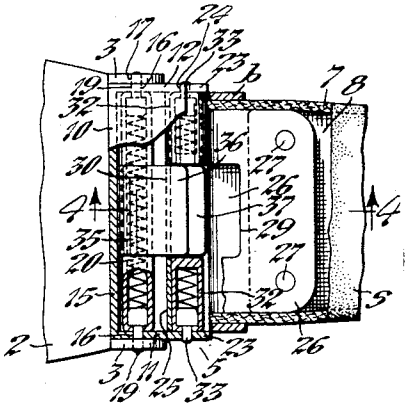


Fig. 3.

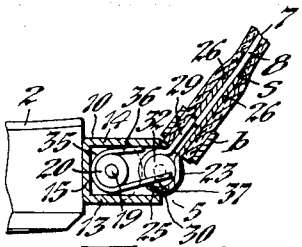


Fig. 4.

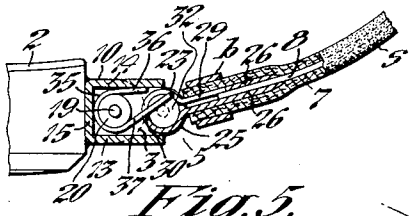


Fig. 5.

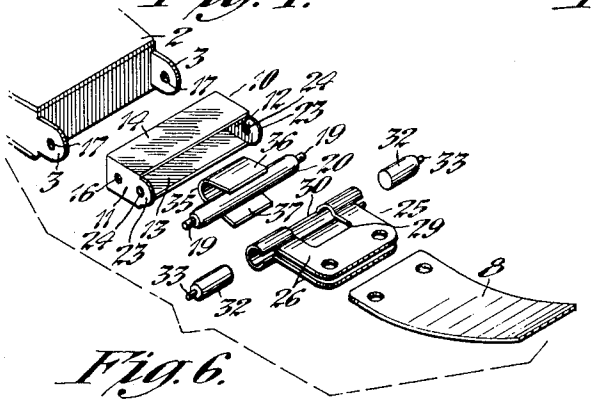


Fig. 6.

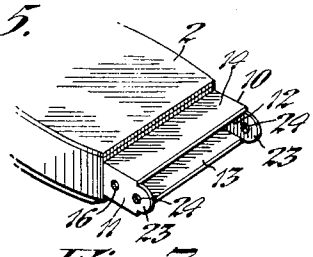


Fig. 7.

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UNITED STATES PATENT OFFICE

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WRIST WATCH BRACELET

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Application January 18, 1935, Serial No. 2,410

14 Claims. (Cl. 224—4)

This invention relates to wrist-watch straps, bands and bracelets and particularly to a talon-type bracelet comprising opposite arcuately-shaped arms hingedly connected to the sides of the watch and resiliently operated to clasp around the wrist of the wearer.

One object of the invention is to provide an improved means for hinging the arcuate arms or talons of the bracelet to the sides of the watch-case with the hinges embodying resilient means for swinging the arms into closed relationship.

Another object of the invention is to provide hinging means of the type indicated which may be used with wrist-watches having lugs or ears on the watch-case for attaching the bracelet thereto.

Another object of the invention is to provide a hinge-device of the type indicated having its mechanical elements entirely enclosed and concealed from view.

Another object of the invention is to provide a hinge-device of the type indicated which is simple in construction, and one which may be conveniently applied to the watch-case without the use of solder, screws, rivets or other extraneous parts or the employment of special tools for the purpose.

Another object of the invention is to provide a hinge-device of the type indicated which is compact in size, neat and finished in appearance, and efficient in use for the purpose specified.

Further objects of the invention are set forth in the following specification which describes the device as embodied in two forms of construction by way of example, as illustrated by the accompanying drawing. In the drawing:

Fig. 1 is a perspective view showing a conventional type of wrist-watch having opposite spring-arms or talons connected to its case by the present improved hinge-device;

Fig. 2 is an edge view of the watch and talon bracelet illustrating by dash lines the manner in which the arms or talons may be swung into open position for placing the bracelet on and removing it from the wrist;

Fig. 3 is an enlarged plan view partly in section of the hinging means for the bracelet;

Fig. 4 is a view partly in section of the improved hinge device taken on line 4—4 of Fig. 3, illustrating the arm or talon in position as clasped about the wrist;

Fig. 5 is a similar view showing the arm or talon swung back on its hinge;

Fig. 6 is a composite perspective view of the several parts of the hinge-joint shown in disassembled relationship; and

Fig. 7 is a perspective view of one side of a watch-case showing the hinge-joint mounting or casing as formed integral therewith.

The present improved hinge-device comprises, in general, a box-like bearing-member or casing adapted for attachment to the spaced lugs or ears on the side of the watch-case or formed integral therewith and means for hingedly mounting the arm or talon to the member. Resilient means in the form of a U-shaped leaf-spring is held within the bearing-member and arranged with one of its leaves acting against the talon-arm to normally swing the latter on its hinge into closed relationship.

Referring to the drawing, Fig. 1 illustrates a conventional type of wrist-watch 2 having spaced ears or lugs 3 on the opposite sides of its case to which different types of bracelets may be attached. The spaced lugs 3, shown more clearly in Figs. 3 and 6, serve as attaching means for anchoring the enclosed hinging mechanism 5 to which the talon-like arms 7 are pivotally connected; but it is to be understood that one of the arms may be rigidly fixed to the case 2 and the other arm pivotally connected to the case.

Referring to Fig. 6 of the drawing, the hinging device 5 for each talon comprises a hollow box-like bearing-member or casing 10 preferably constructed from sheet-metal to provide side walls 11 and 12, top and bottom walls 13 and 14 and one end wall 15 adapted to abut the side of the watch-case 2 when the member is assembled therewith. The forward end of the bearing-member 10 is open for receiving the end of a talon 7, the terminal portion of which is of substantially the same size as the opening to form a closure therefor as will later appear. The bearing-member 10 may be connected to the watch-case 2 by means of a spring-pin 20 extending through apertures 16 in its side walls 11 and 12 and engaging apertures 17 in the spaced lugs 3 on the case. As illustrated in Fig. 3, the spring-pin 20 is constructed as a tubular shell of appropriate length to fit between the walls 11 and 12 of the member 10 and having spring-pressed telescopic projections or pintles 19 at its ends which pass through the apertures 16 and 17 in the bearing-member 10 and the lugs 3 on the watch-case 2, respectively. This form of spring-pin is of usual construction and its method of operation adapts it to be readily assembled within the member 10 with its pintles thereafter engaged with the

ears 3 for attaching the hinge-joint 5 thereto while providing for quick detachment of the bearing-member from the ears when desired. The walls 11 and 12 of the member 10 are extended beyond the open end thereof to provide hinge-ears 23 for pivotally mounting the arm or talon 7 in the manner as later explained.

The arcuate arms or talons 7 may be constructed from relatively thin stock, being preferably constituted as semi-flexible metal strips 8 bent into shape to conform to the contour of the wearer's wrist. The metal strips 8 constituting the arms or talons 7 may be plated or sheathed with precious metal and embossed, engraved or otherwise ornamented; while in other instances the metal is covered with a sheathing of fabric or soft leather as indicated in the present drawing. The fabric or leather sheathing *s* may be in the form of a glove-cot fitted snugly about the tapering strip 8 with the edges of the material bound at the hinge-joint by means of a metal strap or band *b* to provide a finished appearance.

The talon 7 is provided with a cylindrical sleeve or end bearing 25, shown in detail in Fig. 6, for pivotal attachment with the bearing-member 10. The end bearing 25 is constructed from sheet-stock folded and bent to form the tubular sleeve with wing-portions 26 projecting from one side thereof in spaced relationship to adapt them to embrace the end of the strip 8. The wing-portion 26 may be riveted to the end of the strip 8 in the manner indicated at 27 in Fig. 3 or attached by any other suitable means. The metal of one wing 26 of the end bearing 25 is slotted or cut away at 29, as shown in Figs. 3 and 6, to provide a bearing edge or abutment 30 which is used for a purpose to be later explained. In this manner the cylindrical sleeve portion of the member 25 is divided into two spaced loops for receiving hinge-pins 32 at each side. As herein illustrated, each pin 32 is of substantially the same construction as the spring-pin 20 before described, except that it has only one spring-pressed pintle 33 projecting from its end. The pintles 33 are adapted to engage in bearing apertures 24 in the hinge-ears 23 on the bearing-member 10 to pivotally connect the arm or talon 7 thereto. The cylindrical sleeve or end bearing 25 at the end of the talon 7 is of such length and diameter as to entirely fill the opening at the forward end of the bearing-member 10 to form a closure therefor when the talon is pivotally connected to the member.

The arm or talon 7 is normally urged toward the opposite arm to clasp the watch to the wrist of the wearer by means of a spring 35. As shown in Fig. 6 the spring 35 is preferably constructed from a strip of resilient material such as tempered steel bent into U-shape to provide two opposed arms or leaves 36 and 37 extending forwardly from its loop or bowed end. The spring 35 is positioned within the bearing-member 10 and held in place by the spring-pin 20 which extends through the loop at its end. One leaf 36 of the spring 35 bears against the inner side of the bottom wall 14 of the member 10 while the opposite leaf 37 which is somewhat longer projects into the slot or opening 29 in the side of the end member 25 with its flat face engaging the edge or abutment 30. The pressure of the leaf 37 against the edge 30 tends to swing the arm or talon 7 on the ears 23 to normally maintain it in the position illustrated in Fig. 4, while at the same time being yieldable to adapt the arm to be swung back into the position shown in Fig. 5.

The various parts of the improved hinge-device are assembled in the manner as next explained. The spring-pin 20 is first inserted through the loop of the U-shaped spring 35 as shown in Fig. 6 and both elements then assembled with the bearing-member 10. This is accomplished by forcing the pintles 19 of the spring-pin 20 inwardly and sliding the two parts into the member 10 until the pintles register with and snap into the apertures 16. With the spring 35 and pin 20 in position the arm or talon 7 with its attached end-member 25 is pivotally connected to the ears 23 by forcing the pintles 33 inwardly and sliding the member into place between the ears until the pintles snap into the apertures 24. As the end-member 25 is slid into place between the ears 23 the leaf 37 of the spring 35 is guided into the slot or opening 29 to engage against the edge or abutment 30. It will be observed by reference to Fig. 3 that the leaf 37 of the spring 35 fits closely between the opposite edges of the slot 29 and is thus held against lateral displacement. It is also to be noted that the leaf 37 of the spring 35 assumes a position between the inner ends of the spring-pins 32 to maintain them in spaced relationship with their pintles engaged in the apertures 24 in the ears 23.

The complete hinge-device is next connected to the watch-case 2 by pressing the pintles 19 at the ends of the spring-pin 20 inwardly and sliding the member 10 into position between the ears or lugs 3 on the watch-case 2 to cause the pintles to snap into the apertures 17 therein. With the hinge-joint 5 thus connected to the watch the side wall 15 of the member 10 abuts the side of the case to hold the bearing-member from rocking or turning on the pin 20.

With the parts assembled in the above-described relationship the arm or leaf 37 of the spring 35 acts against the abutment 30 of the end member 25 to apply pressure tending to swing the talon 7 on its pivot to close it into the position illustrated by full lines in Fig. 2; it being understood that the opposite arm or talon 7 may be connected to the watch in the same manner so that the ends of the two talons will be maintained in overlapping relationship as indicated in Figs. 1 and 2 of the drawing. In other instances the arms or talons 7 may be proportioned to adapt their ends to meet in abutting or spaced relationship.

When it is desired to apply the bracelet to the wrist the two arms or talons 7 are swung back on their hinges in the manner indicated by dash-lines in Fig. 2 to adapt them to be placed around the wrist. As the talons 7 are released the springs 35 in their hinges act to close them together to snugly clasp the wrist. The springs 35 are held under sufficient tension to prevent accidental opening of the arms so that the watch is held securely on the wrist without danger of disconnection therefrom. The watch may be readily released from the wrist by simply swinging the talons 7 apart and thus the bracelet is more easily and conveniently applied to and removed from the wrist than with other conventional types of bracelets heretofore used.

Fig. 7 illustrates another embodiment of the invention wherein the bearing-member 10 is constructed integral with the watch-case 2 or soldered or otherwise secured thereto. It will be understood that this latter form of construction is intended for use with watch-cases having bracelets applied thereto at the factory where the watches are made: whereas, with the first de-

scribed form the hinge-member is adapted to be applied by the jeweler or other tradesman selling the watch and bracelet as separate articles.

It will be observed from the foregoing that the present invention provides a particularly ingenious device for hinging the spring-operated arms or talons of a bracelet to the sides of a watch-case, with the mounting compacted into a minimum space and the mechanical elements entirely enclosed and concealed from view. The device is especially simple in construction with its parts adapted for economical manufacture from sheet-metal stampings and convenient assembly without the use of special tools.

While the invention is herein shown and described as embodied in a preferred form of construction with one modified form illustrated, it is to be understood that variations may be made in the structure and arrangement of the parts of the device without departing from the spirit or scope of the invention. Therefore, without limiting myself in this respect, I claim:

1. A band or bracelet for wrist-watches comprising opposite arms shaped to conform substantially to the contour of the wrist, a hollow bearing-member on the side of the watch-case, means for pivotally connecting an arm to the bearing-member, and a leaf-spring enclosed in said hollow member with one end acting on the arm to swing it on its pivot.

2. A band or bracelet for wrist-watches comprising a pair of opposite talons shaped substantially to the contour of the wrist, a hollow bearing-member mounted on the side of the watch-case, means for pivotally connecting one of the talons to the bearing-member, and a U-shaped leaf-spring enclosed in said bearing-member with one end in engagement therewith and the opposite end engaging the talon to swing the latter on its pivot.

3. A band or bracelet for wrist-watches comprising a pair of opposite talons shaped substantially to the contour of the wrist, a hollow bearing-member mounted on the side of the watch-case, means for pivotally connecting the talon to the bearing-member, and a U-shaped leaf-spring held within the bearing-member with one leaf engaging the interior of the member and the opposite leaf acting against the talon to swing the latter on its pivot.

4. A band or bracelet for wrist-watches comprising a pair of opposite talons shaped substantially to the contour of the wrist, a hollow bearing-member mounted on the side of the watch-case, means for pivotally connecting a talon to the bearing-member, an abutment on the talon located within the bearing-member, and a U-shaped leaf-spring within the bearing-member engaging the abutment to swing the talon on its pivot.

5. A band or bracelet for wrist-watches comprising a pair of opposite talons shaped substantially to the contour of the wrist, hollow bearing-members mounted on the opposite sides of the watch-case, means for pivotally connecting the talons to the bearing-members, and U-shaped springs within the bearing-members for actuating the talons to swing them into engagement with the wrist of the wearer.

6. A band or bracelet for wrist-watches comprising a pair of opposite talons shaped substantially to the contour of the wrist, a pair of hollow bearing-members having opposite hinge-ears, transverse pins for mounting the bearing-members on the lugs on the opposite sides of the watch-case, means for hingedly connecting the talons between the hinge-ears of the bearing-members, and U-shaped leaf-springs in the bearing-members embracing the transverse-pins and acting against the talons to swing them into engagement with the wrist of the wearer.

7. A band or bracelet for wrist-watches comprising a pair of opposite talons shaped substantially to the contour of the wrist, one of said talons having its end apertured to provide an abutment, a hollow bearing-member on the side of the watch-case, means for pivotally connecting the apertured end of the talon to the bearing-member, and a U-shaped spring having opposite leaves arranged with one of said leaves bearing against the interior of the bearing-member and the other leaf projecting outwardly therefrom into the aperture of the talon and engaging the abutment to swing the talon on its pivot.

8. In combination with a watch-case, a hollow housing on the side of the case having its outer end open, a talon pivotally connected to the housing within its open end and cooperating with the housing to form a closure, and a spring within the housing for engaging the end of the talon to swing the latter on its pivot.

9. In combination with a watch-case, a bearing-member, means for connecting the bearing-member to the side of the watch-case, a leaf-spring within the bearing-member and held against longitudinal movement by the connecting means, and a talon arm pivotally connected to the bearing-member and having an opening at its end adjacent the bearing-member for receiving the end of the spring to hold it laterally in place, said spring acting against one edge of the opening to swing the arm on its pivot.

10. In combination with a watch-case, a box-like bearing-member fixed to the side thereof with its outer end open and having hinge-ears with bearing-apertures at the sides of the opening, a talon having a bearing loop at its end for closing the open end of the bearing-member, means for pivotally connecting the looped end of the talon between the hinge-ears on the bearing-member, spring-pins in the loop having pintles engaging the apertures in the hinge-ears, said talon having an abutment positioned within the housing, and a leaf-spring within the bearing-member engaging the abutment to exert pressure on the talon to swing it on its pivot.

11. In combination with a watch-case having apertured hinge-lugs, a hollow bearing-member positioned between the lugs on the case and having apertures in alinement with the apertures therein, a U-shaped leaf-spring within the bearing-member, a spring-pin extending between the leaves of the spring and having telescopic pintles projecting through the alined apertures in the bearing-member and lugs, a talon-arm, and means for pivotally connecting the talon-arm to the bearing-member, said spring having one end engaging the arm to swing the latter on its pivot.

12. In combination with a watch-case, a box-like bearing-member fixed to the side thereof and having apertured hinge-ears, a talon having a bearing loop at its end, spring-pins in the loop projecting into the apertures of the hinge-ears for pivotally mounting the talon on the bearing-member, an abutment on the looped end of the talon, and a leaf-spring within the bearing-member engaging the abutment on the talon to swing the latter on its pivot.

13. In combination with a watch-case, a hollow box-like bearing-member formed integral

therewith, a pin extending transversely within the bearing-member, a substantially U-shaped leaf-spring housed within the bearing-member with its looped end enclosing the pin, a talon-arm, and means for pivotally connecting the talon-arm to the bearing-member with the leaf-spring acting against the arm to swing the latter on its pivot.

14. In combination with a watch-case having a box-like projection on its side, a leaf-spring enclosed within the projection, means for anchoring the spring in place therein, a talon-arm, and means for pivotally connecting the talon arm to the projection with the spring acting on the arm to swing the latter on its pivot.

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