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ADJUSTABLE WATCHCASE FOR WRIST WATCHES

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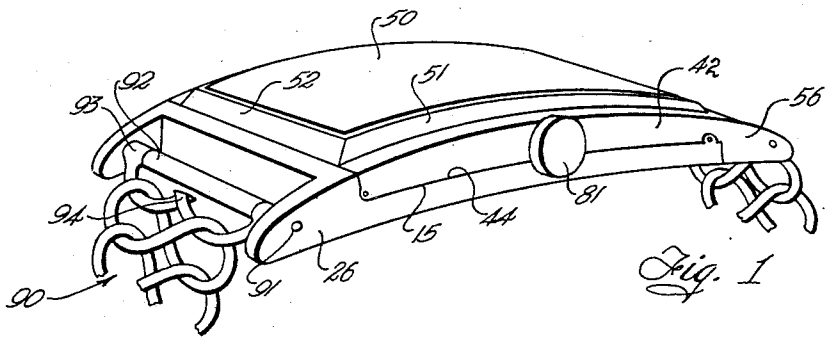


Fig. 1

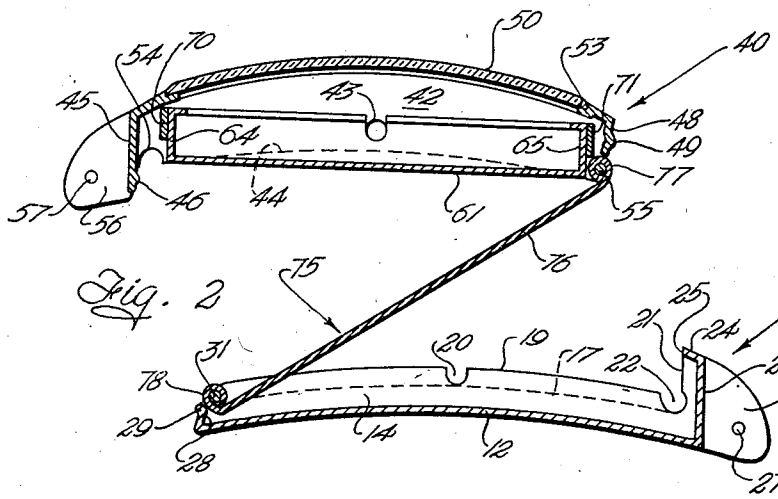


Fig. 2

Fig. 3

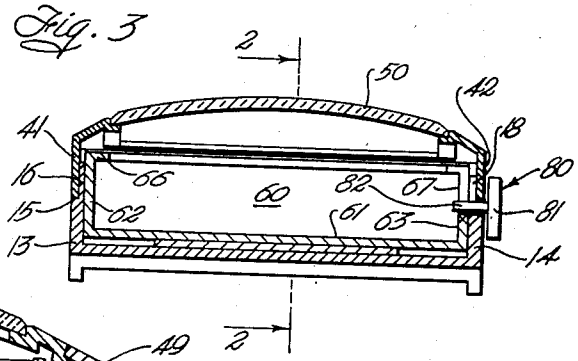
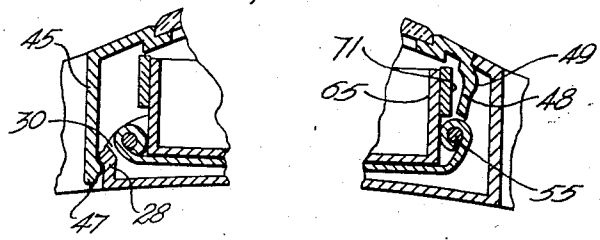


Fig. 4



Inventor
FRANK S. MOODY

By Hazard & Miller
Attorneys

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ADJUSTABLE WATCHCASE FOR WRIST WATCHES

Frank S. Moody, Los Angeles, Calif.

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4 Claims. (Cl. 58—88)

My invention relates to an assembly of a wrist watch with a bracelet by which a portion of the watch case forms an extension or foldable link assembly whereby the bracelet may be enlarged to pass over the hand and then when collapsed or re-folded makes a snug fitting bracelet holding the wrist watch in place. With this type of construction the band forming the bracelet whether of chain or leather, is of the proper and desired length for the size of the wrist and the complete enlargement and shortening of the assembly is through the medium of the watch case having the foldable and hinged elements.

Considered in more detail the watch case may be of somewhat the usual nature as to ornamentation and with either a curved or a flat back to contact the wrist, the front of the case manifestly having the crystal for exposing the face of the watch and the back of the case is preferably imperforate for contacting the wrist. The watch case may therefore be defined as having an inner and an outer portion, the inner portion being so much of the case as engages the wrist and the outer portion the part carrying the watch movement with the watch face and crystal. Therefore a feature of my invention comprises a folding or extension link providing a hinged and extension connection between the inner and outer portions of the watch case, the connection of the link being such that the three elements, that is, the outer portion of the case, the link and the inner portion of the case, may be extended substantially into an approximate line or conforming to the curvature around the hand. This enables the assembly to be slipped over the hand or to be removed and then when folded and collapsed together the two parts are interlocked.

Another feature of my invention resides in the latching or interlocking features of the inner and outer portions of the watch case in that there are snap fasteners operating on the principle of nubs engaging with complementary keepers or detents in which there is a complementary resilient mounting so that a proper pressure is developed to hold the various parts in their locked or latched position when the assembly is in the folded position for fitting on the wrist. Thus as the chain or wrist band of the bracelet has one end attached to the inner portion of the case and the other end to the outer portion, the attachments being at opposite ends of the case, manifestly the nub and resilient keeper or detent assembly must be at both ends of the watch case, thus when the bracelet is pulled tight around the wrist, the two portions of the case snap together and are retained in position. Another feature of my invention is that one of the latches functions to a certain extent as a pivot in opening and closing the watch case assembly. This permits the opposite end to be tilted upwardly in the procedure of unlatching the wrist watch and bracelet assembly for extension or in folding these portions together.

My invention is illustrated in connection with the accompanying drawing, in which:

Fig. 1 is a perspective view showing the outside of the watch case with the front and the inner portions of the case in their locked position and illustrating a portion of the bracelet chain.

Fig. 2 is a longitudinal section and may be considered substantially on the section line 2—2 of Fig. 3 in the direction of the arrows, the watch movement or works being omitted and showing the front and inner portion of the case separated.

Fig. 3 is a transverse substantially central section showing the front and inner portion of the case in their nested position, the movement or works of the watch being omitted.

Fig. 4 is a longitudinal section substantially the same as in Fig. 2 but showing the front and inner portion of the case nested, the two end portions being shown and the center portion omitted.

In my invention I define the inner portion of the case by the assembly numeral 11. This has an inside imperforate inner wall 12 which is preferably concave on its lower surface to conform approximately to the curvature of a person's wrist. There are two opposite sides 13 and 14 extending upwardly from the bottom. The side 13 has a ledge 15 and an upwardly extending thin section 16. The side 14 also has a similar ledge 17 shown dotted in Fig. 2 with a thin upwardly extending portion 18. Both of these thin portions terminate in an upper edge 19. The edge 13 is provided with a notch 20 to accommodate the stem for winding the watch movement as hereunder detailed. Both sides also have an upwardly extending fin 21 with a corner notch 22 terminating the edges 19 at one end. This end of the case has an end wall 23 and an inwardly extending lip 24 provided with an edge 25. There are a pair of ears 26 extending beyond the sides and the ends having a perforation 27 for a pintle for the chains or bands of the bracelet as hereunder detailed. The opposite end of the inner portion of the case has an upwardly extending end wall 28 with an outwardly extending nub 29 or shoulder. A curved fin 30,

note particularly Fig. 4, extends upwardly from the end 28 and joins the sides 13 and 14 on both sides and connecting these curved fiins there is a pintle pin 31 for a link hereunder detailed. It is manifest therefore that the inner portion of the watch case forms a shallow tray with the bottom wall 12 and the sides 13 and 14 forming the main stiffening element but on account of the ends 24 and 28 being also connected to the bottom and to the sides, these are also quite stiff so that the lip 24 with its tip edge 25 may be considered as comparatively rigid.

The front portion of the case designated by the assembly numeral 40 includes side members 41 and 42, the member 42 having a central notch 43 to accommodate the winding stem of the watch as hereunder detailed. This is aligned to meet the notch 20 and form substantially a circular opening. The inner edge 44 of these sides conforms to the curvature of the ledges 15 and 17 so that the sides 41 and 42 fit snug against such ledges and align with the sides 13 and 14, thus forming a continuity of side surfaces for the watch case when the parts are in their folded or latched position. At one end of the sides 41 and 42 there is a transverse end plate 45. This has an internal transverse nub 46 and terminates in a lower transverse edge 47, note Figs. 2 and 4. The opposite end has a shallow depending end piece 48, note Figs. 2 and 4 and this has an outwardly extending nub 49 transverse at the end of the front portion of the watch case.

The glass or crystal 50 for exposing the face of the watch movement may be mounted and held in any suitable manner to the side walls 41 and 42 and the ends 45 and 48. In the illustration there are two similar sloping side edge members 51 and two similar end members 52, these being provided with the usual rim seat 53 for the edges of the glass or crystal. These portions 51 and 52 are formed integral with the sides 41 and 42 and the ends 45 and 48 stiffen the front or upper portion of the watch case. At one end of the lower edge of the sides 41 and 42 there are notches 54 and at the opposite end there is a pintle pin 55 to form the hinge for the connecting link hereunder detailed. A pair of ears 56 similar to the ears 26 extend beyond the end 45 and conform in design to the ears 26. These have a perforation 57 for a pin similar to the perforations 27 for connecting the chain of the bracelet or band.

A tray 60 for the watch movement has a bottom 61, two opposite sides 62 and 63 and similar ends 64 and 65. These sides and ends preferably have an inwardly turned rim or ledge 66. The side 63 is provided with a deep notch 67 which also extends through a portion of the ledge 66 to accommodate in winding stem of the watch. This tray is held in position by frictional engagement or by clamping the two stiff cross members 70 and 71 in the front part of the case which extend from side to side, that is, between the sides 41 and 42. There is however a slight longitudinal space between the sides 62 and 63 of the tray on the outside and the walls 41 and 42 of the front or outer portion of the watch case. However when the case is in its closed position as shown in Figs. 3 and 4, the outside of the side portions 62 and 63 has a snug and frictional fit with the sides 13 and 14 of the inner portion of the watch case designated by the assembly numeral 11.

The pivot and extension link assembly 75 is preferably a flat metal link 76 having an eye 77 at one end engaging the pintle pin 55 forming a hinge at one end and a second eye 78 at the opposite end engaging the pintle pin 31 of the inner portion of the case at its other end. This link is of less width than the width of the watch case considered between the sides 13 and 14 or 41 and 42 and is preferably symmetrically centered. This link when the watch case is in the folded or collapsed position for wearing on the wrist, fits in the inner portion of the case and substantially contacts the bottom 61 of the tray 60 as shown in Figs. 3 and 4. This link which is in the form of a strap practically contacts the convex side of the bottom 12 at about its center, that is, approximately in alignment with the notches 20 and 43 as shown in Fig. 3, however it is manifest that if necessary the strap portion of the link may be curved to conform to the bottom 12 or as above mentioned, this bottom wall of the inner assembly 11 may be straight, that is, flat.

Although the movement of the watch is not illustrated, the winding stem assembly 80 has the knurled knob or head 81 and the stem 82. This stem extends through the notch 43 in the side 42, through the notch 20 in the side 14 and also through the deep notch 67 in the side 63 of the tray 60, therefore when the watch movement is assembled in the case being preferably located in the tray 60, the movement remains in place in the upper or front portion of the watch case when such case is opened for fitting over the hand or removal from the wrist.

Although I do not desire to be limited to the particular type of snap fastener or such construction which holds the two portions of the watch case in their folded or operative position, it will be seen that the nub 29 on the end 28 of the inner assembly engages the nub 46 on the end wall 45 of the front portion of the watch case as shown in Fig. 4. Then the link in the form of a strap 76 extends approximately from this nub towards the opposite end of the front portion of the watch case and a pivoting action may be obtained on the end 28 of the inner portion of the case and the end 45 of the front portion. When the opposite ends of the case are pressed together the end 48 slips inside of the edge 25 of the lip 24, the nub 49 springing inwardly and then expanding outwardly due to its resiliency and thus locks the two portions of the watch case together. The notch 54 in the front portion of the case accommodates a spacer sleeve on the pin 31, there being a spacer sleeve at opposite ends of the eye 78. The notch 22 in the inner portion 11 of the case accommodates similar spacer sleeves on the pin 55 which conforms in shape to the eye 77. In the clasping movement the stem 82 slips into the notch 20 on the side 14, thus the watch case when in its folded position gives the neat appearance of Fig. 1 and may have any desired ornamentation on the two sides.

Although my present invention does not contemplate any particular inventive features in the bracelet 90, the characteristics of such bracelet however is that it is inextensible when once adjusted for a particular person's wrist. In the illustrations, pins 91 extend through the ears 26 and 56. There is a spacer sleeve 92 on the pin, as well as two hubs 93 of a half link 94. Of course it is manifest that any other type of bracelet or inextensible band may be secured to pins 91 or the equivalent. With my construction both ends of the bracelet or band are attached permanently to the ears of the inner and outer portions of the watch case and in fitting the watch over the hand or removing the same, these are not removed but the two portions of

the watch case are separated, the maximum extending being that provided by the link 75 when pulled into substantial alignment with the front and inner portions of the watch case.

Various changes may be made in the details of the construction without departing from the spirit or scope of the invention as defined by the appended claims.

I claim:

1. A watch case for bracelet wrist watches including an inner case portion having an inner wall to contact the wrist and two opposite side walls, a front case portion having two side members with the watch movement mounted therein, an extension link pivoted to the walls of the inner case portion at one end and having its opposite end pivoted to the side members of the front case portion whereby when the two portions are nested together the link has pivoted connections at opposite ends of the case, each portion of the case having means for attaching the bracelet whereby when the two portions of the case are separated and extended with the link, the circumferential distance around the bracelet and through the inner portion, the link and the outer portion of the case, is materially increased over the circumferential measurement when the case is in the nested position, a tray to receive a watch movement mounted in the front portion of the case, the said side walls of the inner portion of the case having a frictional engagement with the tray when the case is in the nested position, the said link when the case is nested fitting below the said tray.

2. A watch case for bracelet wrist watches including an outer and an inner case portion which when nested form a closed bracelet, said inner case portion having an inner complete wall to contact the wrist and having two opposite side walls, said outer case portion having two side walls, an extension link pivoted to the outer case portion and to the inner case portion, means to attach the ends of a bracelet to the inner and outer case portions at the ends respectively opposite the connections of the extension link, a tray to receive a watch movement mounted in the outer portion of the case, the said side walls of the inner portion of the case having a frictional engagement with the tray when the case is in the nested position, the said link when the case is nested fitting below the said tray.

3. A watch case for bracelet wrist watches including an inner case portion having a complete closed inner wall to contact the wrist and having two opposite side walls and an upwardly facing lip at one end, an outer case portion having two side walls, having means to mount a watch movement therein and having a watch glass and a face portion with one end forming a joint line with said lip, the inner case portion having a first end with means for attaching a bracelet, the outer case portion having a first end with means for attaching a bracelet, both of the case portions having second ends with an extension link pivotally connected therebetween, complementary latches between the first end of each of the cases and the said second end of the other case portion, the said joint line being contiguous to the latch of the first end of the inner case portion and the second end of the outer case portion and the side walls of both case portions meeting at a longitudinal joint on each side when the two case portions are in their latched position.

4. A watch case for wrist watches including a front and an inner case portion which when nested and with a bracelet form a closed wrist watch and bracelet, the inner case portion having side walls and a link connecting the front and the inner case portions, combined with a tray to receive a watch movement mounted in the front portion of the case, the said side walls of the inner portion of the case having a frictional engagement with the tray when the case is in the nested position, the said link when the case is nested fitting below the said tray.

FRANK S. MOODY.