

# United States Patent

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[56]	<b>References Cited</b>		
	UNITED STATES PATENTS		
	177,202	5/1876	Crandall et al. .... 40/140
	480,255	8/1892	Emmer ..... 40/140
	2,696,689	12/1954	Speck et al. .... 40/21 C
	3,470,638	10/1969	Friedman et a. .... 40/107

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[54] **WRIST BAND ATTACHMENT**  
**20 Claims, 9 Drawing Figs.**

[52] U.S. Cl. .... 40/140,  
 40/21 C  
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 [50] Field of Search ..... 40/21 C,  
 140, 142, 17

**ABSTRACT:** A frame for incorporation into a wrist band adjacent a wrist band watch has at least one window opening to receive a corresponding ornamental panel or insert which is secured by releasable keeper means. The frame provides a guide channel for movement of the insert into assembled position and the removable keeper means blocks the channel against withdrawal of the insert.

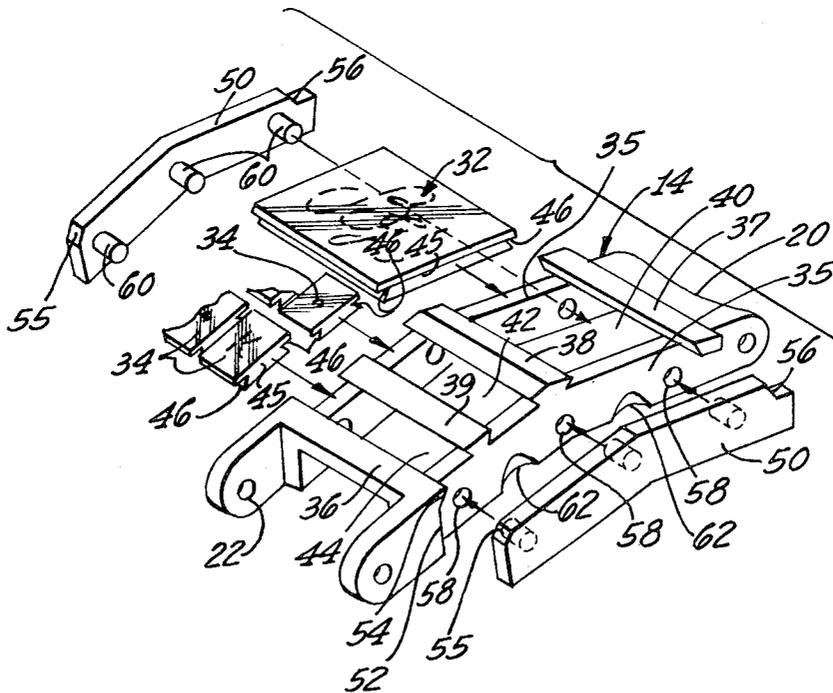


Fig. 1

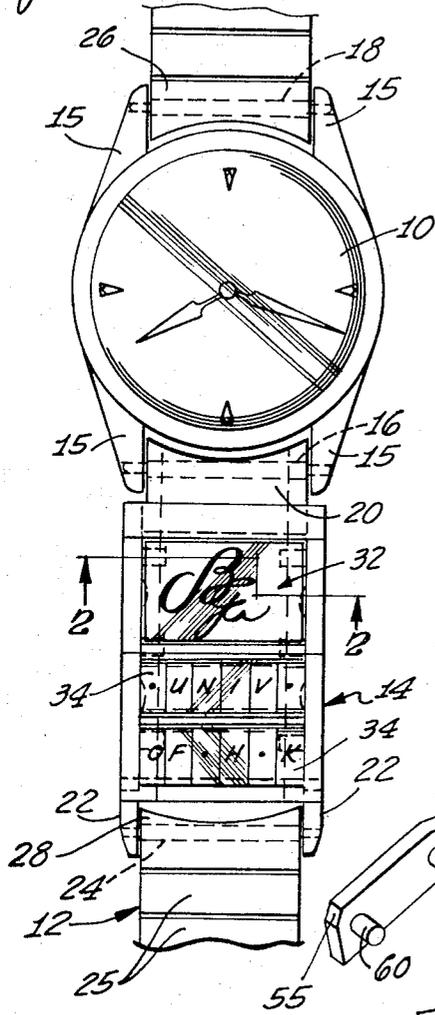


Fig. 3

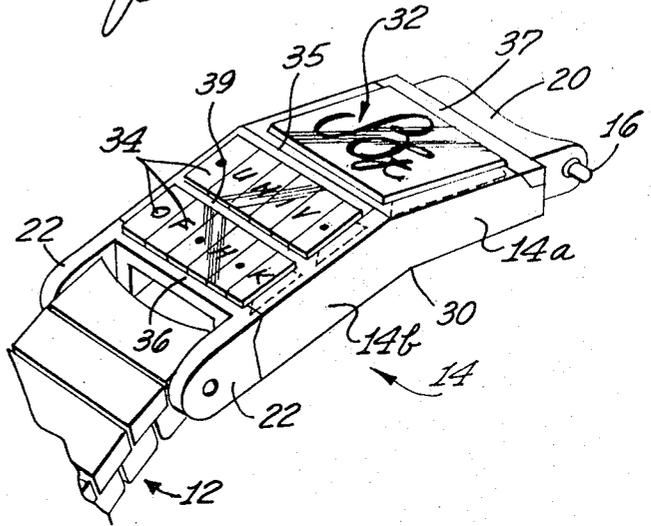


Fig. 4

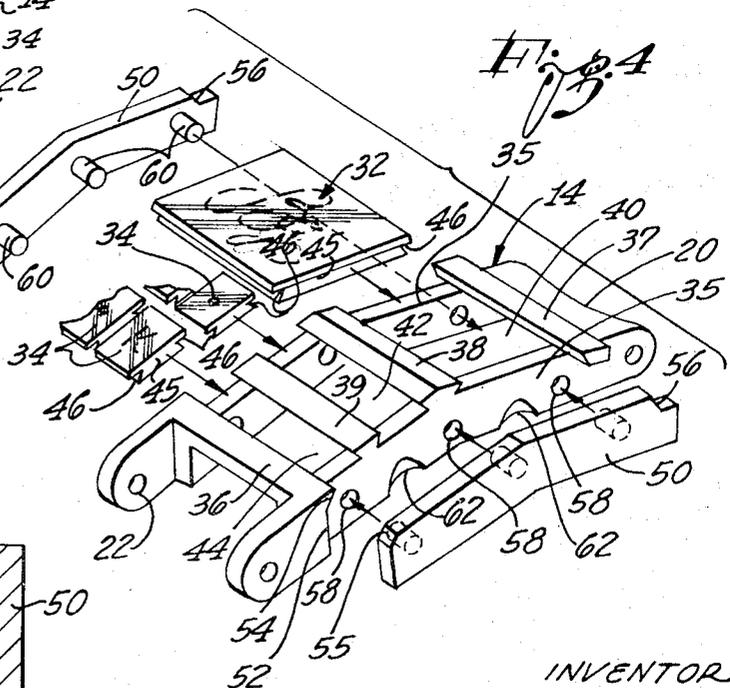
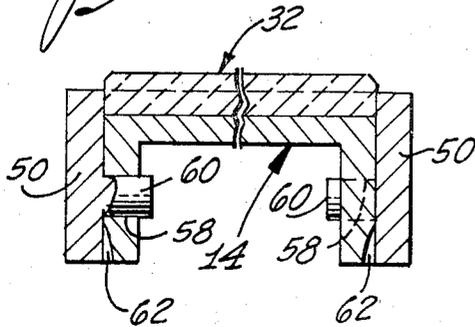
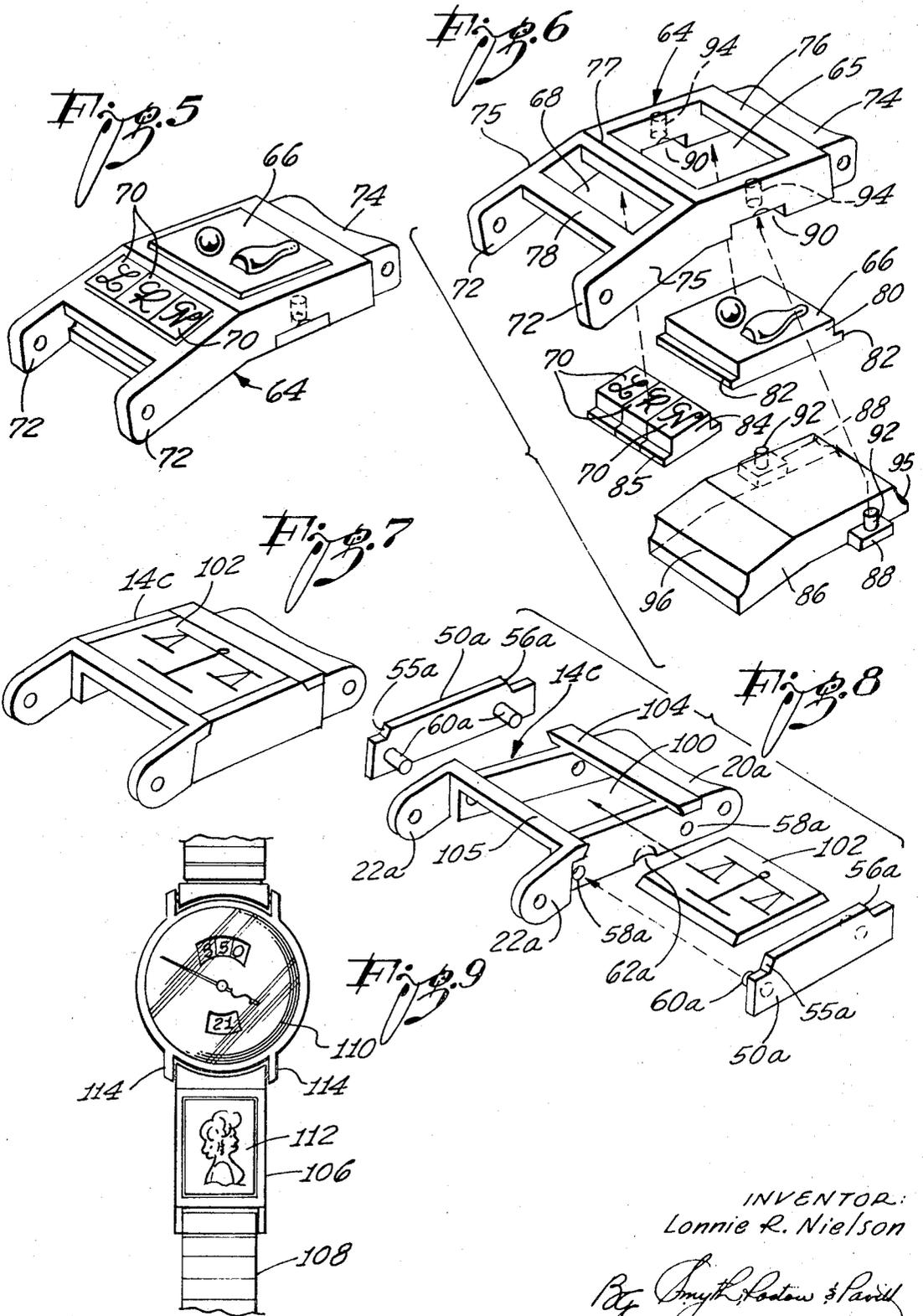


Fig. 2



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## WRIST BAND ATTACHMENT

## BACKGROUND OF THE INVENTION

A conventional wrist band for a wrist watch is impersonal in that it fails completely to reflect the individuality of the wearer or to connote any special differentiation of the wearer from the population at large. There is a need therefore for means for quickly, easily and economically converting a conventional wrist band into a personalized wrist band and for changing such a personalized wrist band whenever desired to reflect changes in interest or in taste on the part of the wearer.

Ornamentation for personalizing a wrist band may comprise, for example, the initials or the name of the wearer or the emblem of some organization with which the wearer is identified. The ornamentation may be a symbol of the wearer's trade or profession or military affiliation or of a particular school or particular sport. In some instances the desirable ornamentation may be a symbol of some abstract concept such as justice with which the wearer wishes to identify himself. The ornamentation may be an artistic design created by the wearer or at least personally selected by the wearer. Whatever the ornamentation it may be depicted by line and/or color and may be mosaic in character or may be either a cameo or an intaglio depiction.

The object of the present invention is to provide means for quickly, easily and economically converting a conventional watch wrist band into such a personalized wrist band.

## SUMMARY OF THE INVENTION

The invention provides a frame with a window opening therein to receive ornamental panels interchangeably, the frame being constructed for incorporation into a watch wrist band as a working link thereof. The frame is adapted for connection with the watch and for connection with the end of the wrist band, it being contemplated that a conventional wrist band will be shortened to compensate for the length of the frame.

In the preferred practice of the invention, one end of the frame is in the form of a knuckle and the other end has a pair of longitudinally extending ears. The knuckle embraces a transverse pivot pin that is carried by a pair of ears of the watch and the pair of ears of the frame at its other end engages a second transverse pivot pin that extends through the usual transverse sleeve at one end of the wrist band. It is a simple matter for any jeweler to shorten a conventional wrist band to the extent required and to install the frame between the watch and one of the shortened wrist band.

The different embodiments of the invention disclosed herein are all characterized by the concept of forming the frame with at least one window opening on its outer face and of providing at least one ornamental panel to span the window opening with the frame and panel having cooperative pairs of mutually engageable portions at opposite edges of the window opening and at opposite margins of the panel to prevent separation movement of the panel outwardly of the window opening. For example, portions of the window opening at opposite edges thereof may overlap corresponding opposite marginal portions of the panel to retain the panel in the window opening.

The different embodiments of the invention are further characterized by the concept of the frame forming a channel cooperative with the panel to guide the panel into its assembled position with suitable keeper means releasably engaging the frame to block the guide channel to keep the panel captivated.

In a preferred embodiment of the invention the frame is divided transversely into two longitudinal portions, each of which has at least one window opening and the two longitudinal portions of the frame are at a slight angle to each other to approximately follow the curvature of the wrist band.

The features and advantages of the invention may be understood by reference to the following detailed description and the accompanying drawings.

## BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a fragmentary plan view of a watch wrist band incorporating a selected embodiment of the invention;

FIG. 2 is an enlarged section along the angular line 2-2 of FIG. 1;

FIG. 3 is a perspective view of the same embodiment of the invention;

FIG. 4 is an exploded perspective view of the same embodiment;

FIG. 5 is a perspective view of a second embodiment of the invention;

FIG. 6 is an exploded perspective view of the second embodiment of the invention;

FIG. 7 is a perspective view of a third embodiment of the invention;

FIG. 8 is an exploded perspective view of the third embodiment; and

FIG. 9 is a fragmentary plan view of a watch wrist band incorporating a modification of the invention.

## DESCRIPTION OF THE PREFERRED EMBODIMENTS OF THE INVENTION

Referring first to FIGS. 1-4 that illustrate the first embodiment of the invention, a watch 10 is carried by a wrist band, generally designated 12, that incorporates a link in the form of a frame, generally designated 14, in accord with the teachings of the invention, the frame being interposed between the watch and one end of the wrist band. The watch 10 has the usual two pairs of longitudinally extending ears 15 on its opposite sides respectively which carry corresponding transverse pivot pins 16 and 18 respectively. One end of the frame 14 is in the form of a knuckle 20 that embraces the transverse pivot pin 16 and the other end of the frame has a pair of longitudinally extending ears 22 that carry a third transverse pivot pin 24. The wrist band 12 is shortened by removal of links 25 therefrom to compensate for the length of the frame 14 and the usual transverse sleeve 26 at one end of the shortened wrist band embraces the second transverse pivot pin 18 while a similar transverse sleeve 28 at the other end of the shortened wrist band embraces the third transverse pivot pin 24.

Referring to FIG. 3 the frame 14 in this particular embodiment of the invention may be regarded as divided transversely into two longitudinal sections 14a and 14b which form a slight angle with an apex at 30, the slight angle permitting the frame to conform approximately to the curvature of the wrist band, i.e. the curvature of the wearer's wrist. The longitudinal section 14a carries a single relatively large removable panel 32 and the longitudinal section 14b carries two rows of small panels 34 with the panels in each row positioned edge to edge.

As shown in FIG. 4 the frame 14 may be a one-piece metal casting having two longitudinal side members 35 which are interconnected by a series of integral transverse members which include the knuckle 20 at one end of the frame, a transverse member 36 at the other end of the frame and three intermediate transverse members 37, 38 and 39 respectively. The transverse members 37 and 38 cooperate with the side members 35 of the frame to form a relatively large window 40 for the relatively large panel 32; the transverse members 38 and 39 and the two side members 35 form a second window 42 for the first row of small panels 34; and the transverse members 36 and 39 along with the side members 35 define a third window 44 for the second row of small panels 34.

The transverse members 36-38 are suitably undercut or bevelled as shown to form a guide channel for edgewise insertion of the large panel 32 and to form similar guide channels for edgewise insertion of the smaller panels 34. In this instance the guide channels are of dovetail cross-sectional configuration, there being a relatively wide dovetail channel at the win-

dow 40 and two narrower dovetail channels at the two windows 42 and 44 respectively. Each of the various panels 32—34 is shaped with a lower body portion 45 of dovetail cross-sectional configuration to slidingly fit into the corresponding dovetail guide channel and each of the panels is extended at its two ends to form end flanges 46 that overhang the lower body portions 45 for sliding engagement with the upper surfaces of the corresponding transverse members 36—39. Thus when the various ornamental panels 32, 34 are installed in the guideways at the three windows 40, 42 and 44 the panels protrude above the frame 14 in an ornamental manner as may be seen in FIG. 3.

Within the scope of the invention any suitable keeper means may be provided to releasably captivate the ornamental panels 32, 34 in their guide channels. In this particular practice of the invention the keeper means comprises two keeper bars 50 that are releasably mounted on opposite sides of the frame 14 in positions to block the opposite ends of the three transverse guide channels and thus captivate the various ornamental panels.

In the construction shown, the two ears 22 of the frame 14 form corresponding shoulders 52 to mate with the corresponding ends of the keeper bars 50, the shoulders having overhanging portions 54 which mate with corresponding end notches 55 in the keeper bars. At the other end of the frame 14 the transverse frame member 37 is extended at its opposite ends to overhang the two keeper bars 50 and the two keeper bars have corresponding end notches 56 to receive the overhanging portions.

The two keeper bars 50 may be releasably attached to the frame 14 in any suitable manner. In this particular embodiment of the invention such of the longitudinal side members 35 of the frame 14 has three recesses in the form of bores 58 and the corresponding keeper bar 50 is provided with three corresponding projections in the form of permanently mounted pins 60 that fit into the three bores with a forced fit or at least with a highly frictional fit. To permit removal of a keeper bar 50 when desired either the frame 14 of the keeper bar may be suitably recessed at the juncture of the frame with the keeper bar to receive a suitable tool for prying the keeper bar out of its assembled position. For this purpose FIG. 4 shows two such recesses 62 in the side of the frame 14.

With one of the two keeper bars 50 removed from the frame 14, it is a simple matter to slide the large ornamental pane 32 edgewise along the corresponding dovetail guideway to the assembled position of the panel in the window 40 and, likewise, it is a simple matter to slide the various smaller ornamental panels 34 edgewise in the guide channels at the two smaller windows 42 and 44 to place the small panels at their assembled positions. The separated keeper bar 50 may then be assembled to the frame 14 by pressing the keeper bar against the side of the frame to cause the three pins 60 to enter the three corresponding bores 58. It is a simple matter, moreover, to shorten a conventional wrist watch band to compensate for the length of the frame 14 and it is a simple matter to interpose the frame 14 between a watch and one end of the shortened wrist band as shown in FIG. 1.

If at any time it is desired to substitute a new ornamental panel for one of the ornamental panels 32, 34 it is a simple matter to pry away one of the retainer bars 50 to permit removal of the selected panel and replacement by a new panel. Since it is necessary that only one of the two keeper bars 50 be removed, obviously one of the two keeper bars may be an integral part of the frame 14.

As examples of ornamental panels that may be used, the large panel 32 in FIG. 1 bears the wearer's initials in script and the two rows of smaller panels 34 bear letters which designate a particular college. As other examples, FIG. 5 shows a relatively large panel which indicates that the wearer is interested in bowling as a sport and FIG. 5 also shows three small panels which bear the initials of the wearer. FIG. 7 shows a panel bearing a symbol for justice and FIG. 9 shows a panel which bears the image of a woman.

In FIGS. 5 and 6 illustrating a second embodiment of the invention, an angular frame 64 provides a relatively large window 65 to receive a corresponding panel 66 and provides a narrower window 68 to receive a row of small panels 70. The frame 64 which is formed with the usual ears 72 at one end and a knuckle 74 at the other end, has two integral longitudinal side members 75 and three integral transverse members 76, 77 and 78, the large window being defined by the transverse members 76 and 77 and the small window being defined by the transverse members 77 and 78.

The relatively large panel 66 is formed with an upper rectangular body portion 80 which is dimensioned to fit the window 65 and the panel is further provided with lower flanges 82 on its opposite ends to engage the under surfaces of the two transverse members 76 and 77 respectively. The under surfaces of the two transverse members 76 and 77 constitute downwardly facing shoulders of the frame 75. In like manner each of the smaller panels 30 has an upper rectangular body portion 84 of a length to fit the window 68 and is further formed with two lower flanges 85 to engage the under surfaces of the two transverse members 77 and 78 respectively. It is apparent that the window 65 serves as a guide channel cooperative with the body portion 80 of the large panel 66 for guiding the large panel to its assembled position and the window 68 serves as a guide channel cooperative with the body portions 84 of the small panels 70 for guiding the small panels to their assembled positions, both guide channels opening on the underside of the frame.

Any suitable keeper means may be provided to block the lower exits of the two guide channels and thus captivate the various panels 66, 70. In the construction shown, a single keeper body 86 releasably engages the frame 64 to captivate the various panels, the keeper body being dimensioned to fit between the longitudinal side members 75 of the frame and being of angular configuration to conform to the angular configuration of the frame.

The keeper body 86 may be releasably attached to the frame 64 in any suitable manner. In the construction shown, the keeper body 86 has two opposite laterally extending tongues 84 which fit into corresponding notches 90 on the undersides of the two longitudinal frame members 75. Each of the two tongues is provided with a permanently mounted upwardly extending pin 92 which is dimensioned for forced fit or at least highly frictional fit in a corresponding bore 94 on the underside of the corresponding longitudinal frame member 75. One end of the keeper body 86 is cut away as indicated at 95 to clear the transverse knuckle 74 and the other end of the keeper body is cut away as indicated at 96 to clear a transverse pivot pin (not shown) that is engaged by the two ears 72 of the frame.

With the keeper body 86 removed from the frame 64 and with the frame turned to upside down position, it is a simple matter to drop the large panel 66 into the large window opening 65 and to drop the three smaller panels 70 into the smaller window openings 68. The keeper body 86 may then be pressed against the underside of the frame 64 to force the pins 92 into the corresponding bores 94. Preferably opposite sides of the frame 64 are provided with recesses 98 adjacent the notches 90 to receive a suitable tool for prying the keeper body 86 out of engagement with the frame.

FIGS. 7 and 8 show a third embodiment of the invention which is generally similar to the first embodiment shown in FIGS. 1—4, as indicated by the use of corresponding numerals to indicate corresponding parts. The frame 14c is relatively short and therefore need not be angular, the frame forming a single window 100 to receive a single relatively large removable ornamental panel 102. The frame 14c is formed with the usual transverse knuckle 20a at one end and is formed with the usual pair of ears 22a at the other end. The frame 14c has two longitudinal side members 35a and has two integral transverse members 104 and 105 which define opposite ends of the window 100. Here again the two transverse members 104 and 105 are undercut to form a dovetail guide channel for the

panel 102 and two keeper bars 50a are releasably mounted on opposite sides of the frame 14c to captivate the panel 102. Each of the two keeper bars 50a is provided with the usual lateral pins 60a to fit into corresponding bores 58a and each of the keeper bars is formed with the usual end notches 55a and 56a. Suitable recesses 62a are provided in the frame 14c to receive a tool for prying loose the two keeper bars 50a.

FIG. 9 shows a modification of the invention comprising a frame 106 of the general character described that is attached at one end to a shortened wrist band 108 and is attached at the other end to a watch 110. The frame 106 has a single large opening to receive a panel 112 and the frame 106 differs from the frame 14c of FIGS. 7 and 8 in that the frame is of a uniform width that is narrow enough for the frame to fit between a pair of ears 114 of the watch for connection to the watch.

My description in detail of the selected embodiments of the invention will suggest various changes, substitutions and other departures from my disclosure within the spirit and scope of my invention.

I claim:

1. An ornament for incorporation into a wrist band of a wrist watch, comprising:
  - a frame to function as a link in the band with the band shortened to compensate for the length of the frame, said frame forming at least one window opening positioned to face radially outwardly of the band;
  - at least one ornamental panel dimensioned to span said window opening,
  - said frame and panel having cooperative mutually engaged portions at opposite edges of the window opening and at opposite margins of the panel to prevent separation movement of the panel from its assembled position outwardly of the plane of the window opening,
  - said frame forming a channel cooperative with the panel to guide the panel into its assembled position; and
  - keeper means releasably engaged with the frame to prevent movement of the panel out of its assembled position along said guide channel to captivate the panel.
2. A combination as set forth in claim 1 in which the frame is divided transversely into two integral longitudinal portions; in which said two longitudinal portions are at a slight angle to each other to approximately follow the curvature of the user's wrist;
  - in which each of said two longitudinal portions has at least one window opening; and
  - in which panels are mounted in the window openings for retention therein by the keeper means.
3. A combination as set forth in claim 1 in which the keeper means releasably engages both the frame and the panel.
4. A combination as set forth in claim 1 in which said cooperative portions comprise two opposite marginal portions of the panel and two opposite portions of the frame overlapping the marginal portions,
  - said overlapping portions of the frame forming a guide channel in the plane of the panel with the guide channel opening onto at least one longitudinal side of the frame,
  - said keeper means blocking movement of the panel in its plane out of its assembled position.
5. A combination as set forth in claim 4 in which said keeper means comprises at least one keeper member in releasable engagement with one longitudinal side of the frame in a position across an open end of the guide channel.
6. A combination as set forth in claim 5 in which one of said frame and said keeper member has a recess therein and the other of said frame and said keeper member has a lateral projection seated in the recess with a forced fit to releasably retain the keeper member at its assembled position.
7. A combination as set forth in claim 6 in which one of said frame and said keeper member is recessed at the juncture of the frame and the keeper member to receive a tool for prying the keeper member away from the frame.
8. A combination as set forth in claim 4 in which said guide channel is open at its opposite ends on the opposite longitudinal sides of the frame and said keeper means comprises two keeper members in releasable engagement with the opposite longitudinal sides respectively of the frame in positions blocking the opposite ends respectively of the guide channel.
9. A combination as set forth in claim 8 in which on each side of the frame one of the frame and the corresponding keeper member has a recess at the juncture of the frame and the keeper member to receive a tool for prying the keeper member away from the frame.
10. A combination as set forth in claim 8 in which said frame has two lateral projections on each of its two longitudinal sides overhanging the two ends respectively of the corresponding keeper members.
11. A combination as set forth in claim 4 in which said guide channel is of a given cross-sectional configuration;
  - in which a first portion of the panel is of corresponding cross-sectional configuration to fit in the channel; and
  - in which the panel is formed with integral opposite end flanges overhanging and concealing the opposite edges of the guide channel.
12. A combination as set forth in claim 11 in which said cross-sectional configuration is a dovetail configuration.
13. A combination as set forth in claim 12 in which the outer face portion of the panel is extended to form said end flanges of the panel.
14. A combination as set forth in claim 1 in which said guide channel extends perpendicular to the plane of the window opening with the guide channel opening onto the underside of the frame; and
  - in which said keeper means is releasably mounted on the underside of the frame across the lower open end of the guide channel.
15. A combination as set forth in claim 14 in which one of said frame and said keeper means has a plurality of recesses therein; and
  - in which the other of said frame and said keeper means has a corresponding plurality of projections fitting into the corresponding recesses with forced fit to releasably retain the keeper means at its assembled position.
16. A combination as set forth in claim 15 in which said keeper means has laterally projecting tongues on its opposite sides; and
  - in which the opposite longitudinal sides of the frame have recesses on the underside of the frame to receive said tongues at the assembled position of the keeper means.
17. A combination as set forth in claim 14 in which said window opening forms the guide channel;
  - in which the frame has downwardly facing transverse shoulders at the lower end of the guide channel; and
  - in which the opposite ends of the panel have longitudinally extending flanges spaced from the outer face of the panel, said transverse shoulders of the frame and said end flanges of the panel constituting said mutually engageable portions of the frame and panel.
18. An ornament for incorporation into a wrist band of a wrist watch, comprising:
  - a frame to function as a link in the band with the band shortened to compensate for the length of the frame,
  - said frame forming at least one window opening, positioned to face radially outwardly of the band;
  - at least one ornamental panel to be mounted in said frame in a predetermined position therein for viewing through said window opening; and
  - keeper means engaged with the frame for holding said panel in said predetermined position on said frame,
  - said keeper means abutting at least one edge of the ornamental panel and forming at least a portion of framing around the window opening,
  - said keeper means being releasably engaged with said frame to permit disengagement from the frame for substitution of one ornamental panel for another.

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19. A combination as set forth in claim 18 in which said keeper means abuts opposite edges of the ornamental panel and forms opposite sides of framing around the window opening.

20. A combination as set forth in claim 18 in which one of said frame and said keeper means has a plurality of bores; and

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in which the other of said frame and said keeper means has a corresponding plurality of pins fixedly extending therefrom and dimensioned for forced fit in said bores to releasably connect the keeper means to the frame.

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