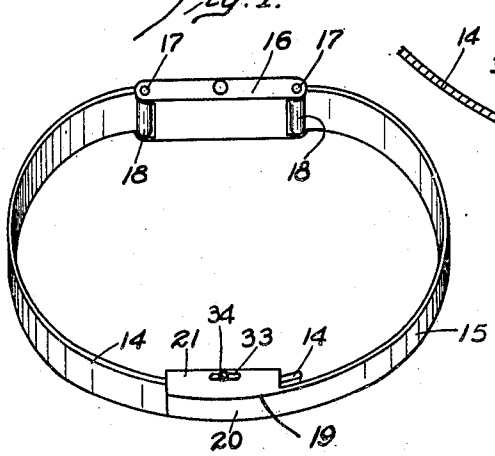
March 3, 1931. E. F. HERSCHEDE 1,794,458

WRIST STRAP CLASP

Filed April 27, 1927 2 Sheets-Sheet 1

Fig. 1.



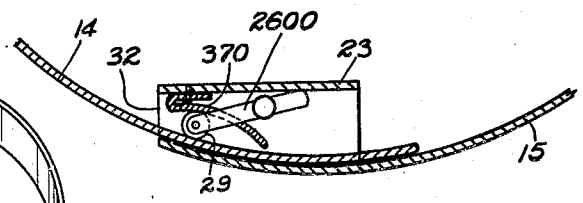


Fig. 7.

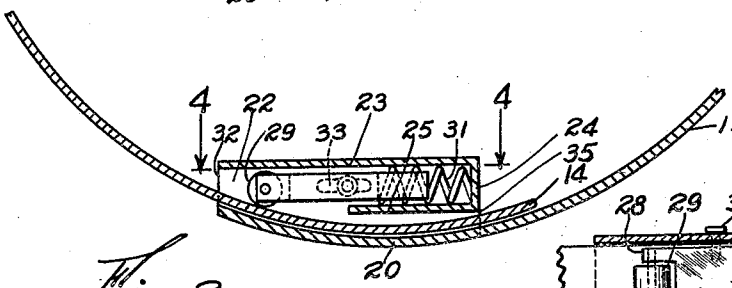


Fig. 2.

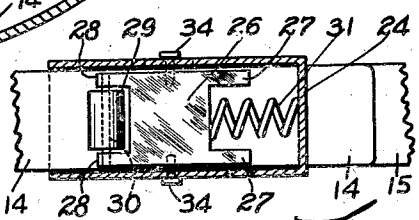


Fig. 4.

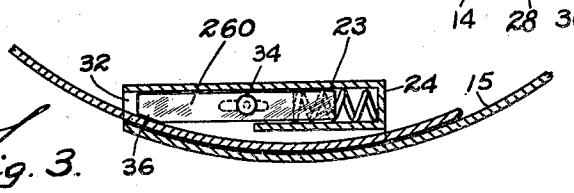


Fig. 3.

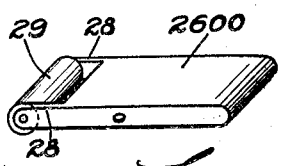


Fig. 6.

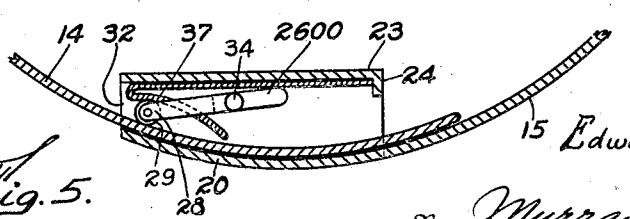


Fig. 5.

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March 3, 1931. E. F. HERSCHEDE 1,794,458

WRIST STRAP CLASP

Filed April 27, 1927 2 Sheets-Sheet 2

Fig. 8.

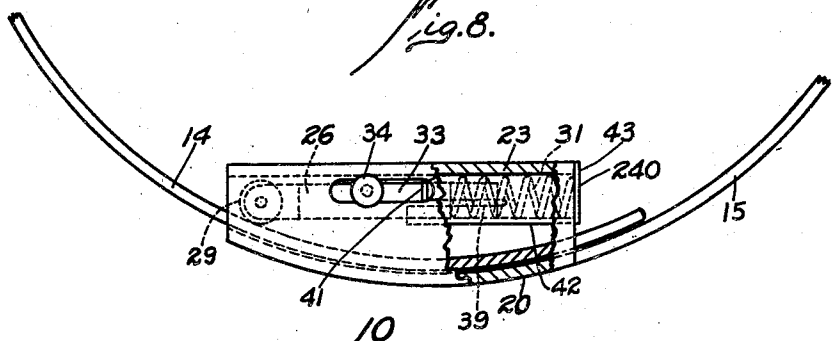


Fig. 9.

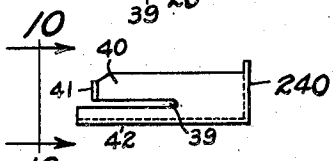


Fig. 10.

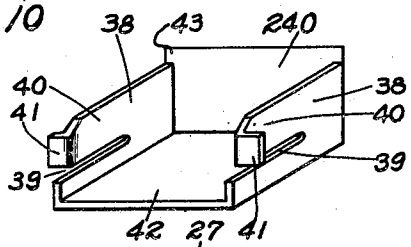
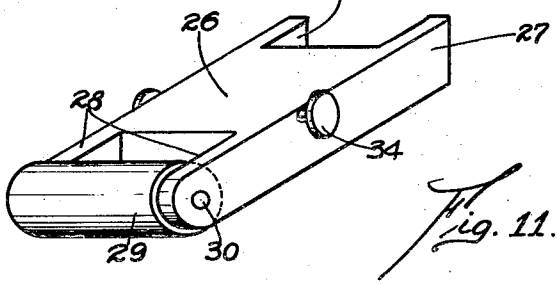


Fig. 11.



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Patented Mar. 3, 1931 1,794,458

UNITED STATES PATENT OFFICE

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WRIST-STRAP CLASP

Application filed April 27, 1927. Serial No. 187,038.

This invention relates to wrist strap clasps such as are used with wrist watches, bracelets and the like and has for an object the provision of a clasp or retaining means for imperforate straps and one which is adaptable for use upon non-yielding strap material such as metal.

Another object is to provide a device of this kind which may be instantly clasped in adjusted position.

Another object of this invention is to provide a clasp of this kind which permits ready and free relative movement of the strap members in one direction but resists any tendency toward relative movement in the opposite direction.

Another object is to provide a device of this kind having a simple means for releasing the straps from clasped position.

These and other objects are attained by the means described herein and disclosed in the accompanying drawings, in which:—

Fig. 1 is a perspective view of a wrist watch with metallic straps, provided with a clasp of the invention, the clasp body being somewhat exaggerated as to relative size.

Fig. 2 is a top cross sectional view of the clasp body shown in Fig. 1.

Fig. 3 is a similar view showing a modified form of the device in Fig. 2.

Fig. 4 is a view taken on line 4—4 of Fig. 2.

Fig. 5 is a view similar to Figs. 2 and 3 and showing another modified form of the clasp device.

Fig. 6 is a perspective view of a part shown in Fig. 5.

Fig. 7 shows another modification of the device as shown in Fig. 5.

Fig. 8 is a top plan view, part being broken away and showing a device similar to that shown in Fig. 2 but having a removable retaining box associated therewith.

Fig. 9 is a side elevational view of the retaining box embodied in the device as shown in Fig. 8.

Fig. 10 is a perspective view of the box shown in Fig. 9 looking toward the general direction of the arrows in Fig. 9.

Fig. 11 is a perspective view of a part shown in Fig. 4.

In the present invention a pair of imperforate and preferably metallic strap members 14 and 15 are suitably secured to a wrist watch 16 by means of pivot pins 17 extending through loops 18 in the straps 14 and 15.

The strap 15 has formed thereon a clasp housing 19 which may be suitably secured thereto or made integral therewith. The housing 19 has its front wall 20 formed by the body of strap 15, and its top and bottom walls 21 and 22 extending rearwardly from the front wall 20. A rear wall 23 is spaced at a distance from the front wall 20 in order to receive the clasp mechanism and the companion strap member 14. A clasp box may be provided by turning the rear wall 23 upon itself to provide an end wall 24 and a wall 25 between the front and rear walls, said latter wall being spaced sufficiently from the inner face of front wall 20 to permit passage of the strap member 14 through the clasp housing. As shown in Fig. 4 a reciprocating plate 26 has a pair of spaced arms 27 at its one end and a somewhat similar pair of spaced arms at 28 at its opposite ends. A freely rotatable roller 29 is mounted upon a pin 30 which is secured at its opposite ends in the arms 28. A spring 31, which may be spiral or W-shaped, is adapted to be inserted between the arms 27 and to abut the body of the plate 26 and the end wall 24 so that the plate is urged bodily toward the open mouth 32 of the clasp housing. The natural curvature of the portion 20 of the strap member 15 provides a convergency at the forward end of the housing which naturally enhances the wedging action of the reciprocating plate. As shown, for example in Figs. 1 and 2, the top wall 21 and bottom wall 22 of the clasp housing are provided with elongated slots 33 through which headed pins 34 extend into suitable perforations in the reciprocating plate 26 thereby permitting the spring 31 to urge the plate toward the mouth 32 while the pins preclude separation of said members.

From the foregoing and by reference to Fig. 2 it will be noted that when the end of strap member 14 is inserted in mouth 32 of the clasp housing, it may be pushed through

said housing and extend through the opening 35 at the opposite end thereof. During this movement the inner face of strap 14 passes over the roller 29 and also urges the plate 26 toward end wall 24 against the resistance of spring 31. The strap 14 lies in sliding abutment with the strap 15 and upon releasing of the pressure on strap 14, the spring 31 will urge reciprocating plate 26 toward the mouth 32 so that the roller 29 will be forced into binding relation between the inner face of rear wall 23 and the inner face of housing or strap member 14. Any tendency to pulling apart of the strap members will cause the roller to tend to bind the parts more firmly, so that accidental separation or pulling apart of the straps is precluded. In order to release the strap from binding engagement, the heads of pins 34 are pushed with the finger tips in the opposite direction thereby withdrawing the plate and roller 29 from frictional binding. In the practical embodiment, it will be understood that the thickness of the clasp housing is relatively less than as shown, so that the device is not conspicious and permits of a neat continuous outer appearance for both straps.

In the device shown in Fig. 3 the plate 260 is substituted for the plate 26 of the device in Fig. 2. The plate 260 may be solid at its forward end and is provided with a tapered face 36 so as to provide a spring urged wedge-block in place of the roller 29. In Figs. 5, 6 and 7, a plate 2600 is used. This plate is provided with a roller 29 as heretofore described but the plate is urged toward the mouth 32 of the clasp housing by a flat spring 37 which may rest upon the rear wall 23. The device as shown in Fig. 7 employs a relatively smaller spring 370 which may be riveted or otherwise secured to rear wall 23. In Fig. 8 there is shown a device similar to that in Fig. 1 save that the retaining means for the spring 31 and reciprocating plate 26 comprises a separable box as shown in Figs. 9 and 10. The box comprises an end wall 240, side walls 38 which are slotted longitudinally as at 39 to provide resilient fingers 40 having outwardly extending lugs 41 thereon. The front wall extending between side walls 38 and end wall 240 completes the structure.

This box is adapted to be slidably introduced into the clasp housing with the upwardly projecting flange 43 of end wall 240 abutting the end of rear wall 23 of the clasp housing. The lugs 41 are depressed upon entering the clasp housing and spring outwardly through the opposed slots 33 in the top and bottom members of the clasp housing, thereby locking the box in position. This removable box facilitates manufacture and assembly of the device and eliminates tedious soldering and riveting.

In assembling this form of device, the sliding plate 26 and spring 31 are positioned in the box shown in Fig. 10 in substantially the same manner illustrated in Fig. 4. This entire assembly is now slidably introduced into the rear open end of the clasp housing after compressing the resilient arms 40 until the lugs 41 are within the normal body lines of the box. The lugs spring outward through slots 33 when the flange 43 has been moved into abutment with the edge of wall 23 of the housing. The box is then firmly held against movement in any direction. The headed pins 34 are then inserted through the slots 33 into the perforations in the sliding block so that the block may be momentarily retracted against the spring in the keeper formed by the box and clasp housing. To disassemble the structure requires merely the removal of pins 34 and a simultaneous depression of the spring lugs 41 to clear the end walls of slots 33, while the box is pulled or pushed out of the housing.

As heretofore stated, the various parts are shown in enlarged and somewhat exaggerated proportions in order that the operation of the device may be more clearly understood. In practical embodiment these parts are very thin so that the over all thickness of the clasp housing represents but little more than the thickness of the overlapping straps. The device is quick acting, and automatic in its locking operation, and is furthermore releasable by a slight movement of the pins 34.

It will be understood that the clasp may be made as a separate unit which may be secured either to the strap or to the watch case itself if desired.

What is claimed is:

1. A metal wrist band comprising a pair of curved metal strap members smooth on both sides and adapted for slidable overlapping one upon the other, an integral housing disposed on the inner curved face of one of the straps and adapted to receive the other strap therein and means in the housing for effecting frictional binding of the smooth faces of the straps.

2. As a new article of manufacture a metal wrist band comprising curved metallic bands smooth on both sides and having free ends adapted for sliding abutment one upon the other throughout their overlapping portions, an integral hollow housing disposed on the inner curved side of one of said bands adjacent the end thereof and adapted to receive the other of said straps in sliding abutment with said first strap, a plate within the housing, a resilient member normally urging the plate toward one end of the housing and a smooth wedging roll carried by the plate for effecting frictional binding of the inserted strap upon the other of said straps.

3. As a new article of manufacture a metal wrist strap clasp comprising a shallow hollow

housing member, a curved metal wrist band member integral with the housing and forming a smooth front wall therefor, a smooth wedging member retained within the housing for longitudinal reciprocation therein, yielding means urging the wedging member in one direction and exteriorly operable means for retracting the wedging member.

4. As a new article of manufacture a metal wrist band member comprising a curved smooth imperforate strap, the inner curved face thereof being adapted for disposition against the wrist of the wearer, a shallow hollow housing member disposed on said interior curved face and concealed from the exterior of said strap, a plate member slidable bodily within the housing, a spring disposed in the housing and urging the plate in one direction and means to manually move the plate against the resistance of the spring.

5. A metal wrist band comprising a pair of curved metal strap members adapted for slidable overlapping one upon the other, one of the strap members having a free end, a housing disposed on the inner curved face of the other strap and adapted to receive therein the free end of the first mentioned strap for disposition of said free end adjacent the inner curved face of said other strap and the wrist of a wearer.

6. As a new article of manufacture a metal wrist band member comprising a curved strap, the inner curved face thereof being adapted for disposition adjacent the wrist of the wearer, a shallow hollow housing member concealed from the exterior of said strap and disposed on the interior curved face thereof, the housing member forming with the curved face a constricted passage, a wedge member slidable bodily within the housing, a spring in the housing for urging the wedge member in one direction, and means to manually move the plate against the resistance of the spring.

In testimony whereof, I have hereunto subscribed my name this 25th day of April, 1927.

EDWARD F. HERSCHEDE.