

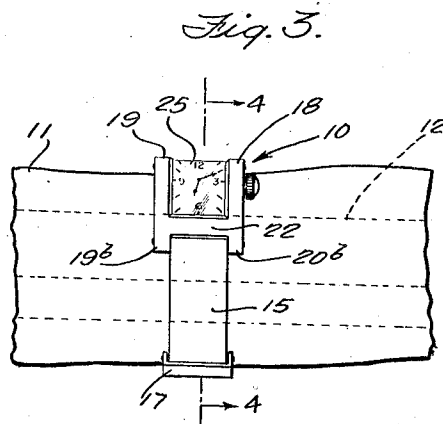
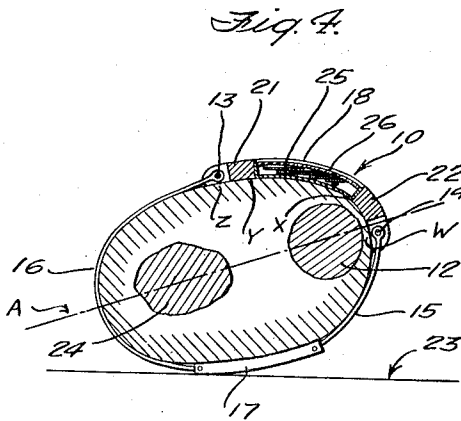
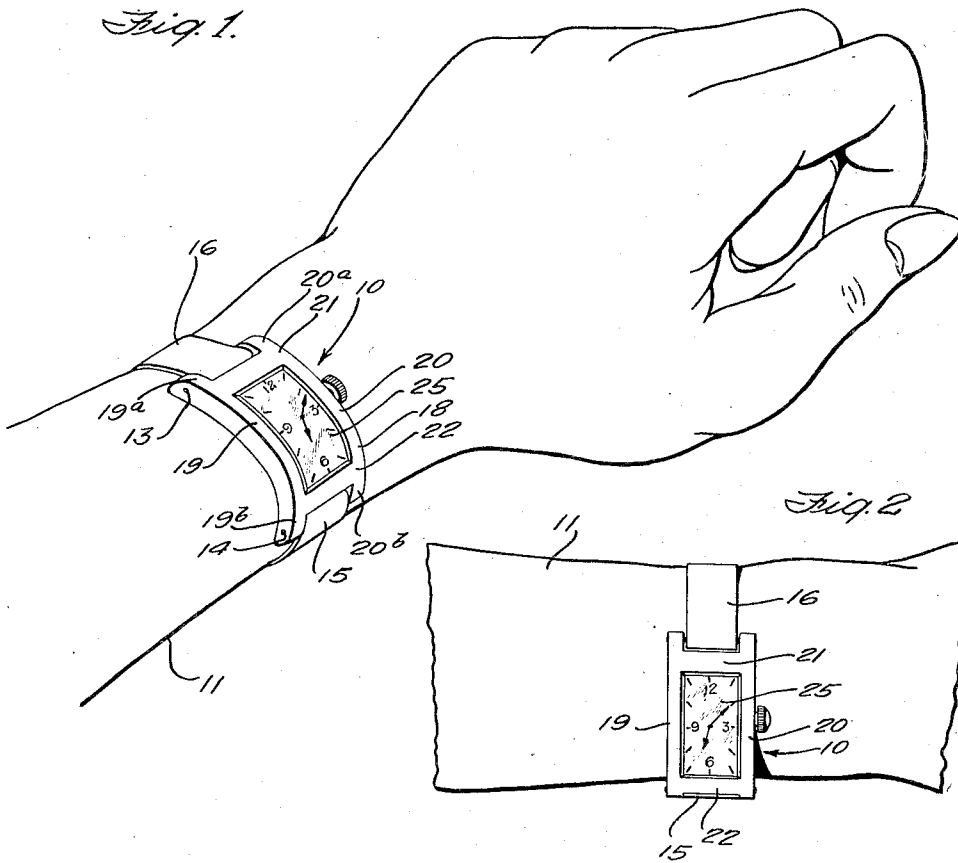
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WATCHCASE

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2,226,138

WATCHCASE

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2 Claims. (Cl. 53—88)

This invention relates to watchcase construction, and more particularly to a wrist-watch case.

One of the objects of this invention is to provide a wrist-watch case which is pleasing in appearance, and conducive to comfort when strapped to the wrist. Another object is to provide a wrist-watch case which affords maximum watch visibility, and at the same time reduces crystal fracture to a minimum. Other objects will be in part apparent and in part pointed out hereinafter.

The invention accordingly consists in the features of construction, combinations of elements, and arrangements of parts as will be exemplified in the structure to be hereinafter described and the scope of the application of which will be indicated in the following claims.

In the accompanying drawing, in which is shown one of the embodiments of my invention, Figure 1 is a perspective view of a wrist watch strapped in place on the wrist;

Figure 2 is a plan view of the wrist watch strapped in place on the wrist;

Figure 3 is a side elevation of the wrist watch strapped in place on the wrist; and,

Figure 4 is a sectional elevation taken along the line 4—4 of Figure 3.

Similar reference characters refer to similar parts throughout the various views of the drawing.

Practically all wrist watches are worn on top of the wrist, i. e. in a position to rest on the radius and ulna thereof and span the space therebetween. When the watch is in this position, or in a diametrically opposite one, on the bottom of the wrist, it is difficult to read at a glance, when the wrist is resting on a table or desk. For example, when a person is writing at a desk, the normal position of his idle arm is such that the plane of the wrist is inclined from the horizontal away from the body. This results from the tapering formation of the hand, which is most massive adjacent the third joint of the thumb. As the wrist extends from the hand in the same general plane as the hand, it is canted away from the body so that a wrist watch cannot be read without lifting the hand and arm and turning the wrist until its top is entirely visible. This is particularly true in the case of a watch whose 6—12 axis is longer than its 3—9 axis, and transverse to the axis of the wrist.

While wrist watches have been developed to a high degree of mechanical and aesthetic perfection, little or no attention has been paid to

the above-noted aspect thereof. Regardless of the accuracy of the watch movement, and the perfection of the ornamentation of the watchcase, the value of the watch to the wearer is primarily proportional to its utility. Hence, if a watch is a source of inconvenience, it fails in its initial purpose.

Furthermore, when a wrist watch is strapped to the wrist in the conventional manner, i. e., wherein it rests on the radius and ulna so that it is substantially coplanar with the top of the wrist, the watch is in perfect position for maximum crystal fracture. Whether the arm is lying flat on a desk, or hanging by the side, the watch is fully exposed and outward movements of the arm from the body are apt to bring the watch crystal directly in contact with various objects, resulting in crystal fracture.

While various attempts have been made to facilitate reading the wrist watch at a glance, and to reduce crystal fracture, these attempts have generally been abortive and unsuccessful, as they usually have resulted in such peculiar and complicated designs that the watch is unsightly in its bulkiness, or otherwise unattractive in appearance, as where so-called "unbreakable" crystals of organic material have been used, such crystals resulting in discoloration. Where thick glass crystals have been employed, optical aberration often results. It is accordingly another object of this invention to obviate these various difficulties in a thoroughly practical and efficient manner.

Referring now to Figure 1 of the drawing, a watch which is generally indicated at 10 is shown strapped to the wrist 11 in a position substantially over the upper, inner portion of the wrist, i. e., with respect to Figure 4, in a position substantially overlying the radius bone 12. Watch 10 has the usual bails 13 and 14 at opposite ends, to which straps 15 and 16 are secured, the other ends of these straps being suitably fastened to a buckle 17 of any suitable type, preferably of the expansible type such as shown in my Patent No. 2,057,589.

Watch 10 includes a case or housing 18, which as is shown in Figure 1 comprises elongated side bars 19 and 20 connected by cross bars 21 and 22. The ends of side bars 19 and 20 project beyond each of cross bars 21 and 22 to provide projections 19a and 19b on side bar 19, and 20a and 20b on side bar 20, which form suitable mountings for bracelet connectors 13 and 14. Thus connector 13 is secured in projections 19a and 20a, and connector 14 is secured in projec-

tions 19b and 20b. It is to be understood, however, that the connectors may be secured to the watchcase in any suitable manner, or if desired, may be formed integrally therewith.

5 In Figure 4, wrist 11 is shown in its natural attitude when resting on a desk or table top 23, i. e., the horizontal plane A of the wrist being inclined from the plane of table 23. This is the natural position of the wrist when the arm is at rest on the table, because of the structure of the hand, which is heaviest adjacent the third joint of the thumb. As noted above, watch 10 is strapped to the wrist 11 on the upper, inner portion thereof, as viewed in Figure 1. To facilitate this positioning of the watch and render it comfortable, case 18 is suitably curved. Thus, between points W and X (Figure 4) side bar 19 (and also side bar 20) is curved sharply in conformity with the contour of the wrist at this point, and in effect forms a sort of hook which, when the watch is strapped on the wrist hooks over the radius 12 and prevents the watch from sagging away from its readily visible position when the wrist is lying in a substantially vertical plane. Between points X and Y of the side bars, the curve is less pronounced, as the curve of the wrist is flatter at this point. The side bars are only slightly curved, or are substantially flat between points Y and Z, as this portion of the watch rests upon the top of the wrist between radius 12 and ulna 24, which is substantially flat. Preferably the arc WX is of constant radius. Similarly, the arc XY is of constant radius, this radius being longer than the radius of arc WX. As the portion YZ is either a very flat curve, or not curved at all, it may be seen that the full curve WZ is of variable radii, and conforms substantially to the contour of the wrist between the central portions of the side and top thereof. Thus side bars 19 and 20, and cross bars 21 and 22 frame an opening adapted to receive a curved watch movement 25, which is covered and protected by a crystal 26 suitably secured between the side and cross bars.

45 It may now be seen that the general contour of watch 10 is curved, the curve thereof substantially conforming to the contour of the wrist at that portion thereof adjacent top and side of the radius bone. Furthermore, watch 10 extends downwardly along the thumb side of the wrist to a point substantially centrally thereof and extends over the top of the wrist to substantially the median line thereof. The watch movement 25 and its crystal 26 accordingly are disposed well to one side, i. e., the radius side of the wrist. Due to the shape of the watchcase it naturally takes up the position on the wrist shown in Figures 1 and 2. Fitting as it does about this portion of the wrist, it will not slide from one side of the wrist to the other even when straps 15 and 16 fit quite loosely about the wrist. Thus, the watchcase may be worn loosely about the wrist, affording maximum comfort, and still remain in this advantageous position where it may be readily viewed by the wearer.

70 By way of further example, when a wrist watch is worn in the conventional manner on top of the wrist, it lies in a substantially vertical plane when the wearer is grasping the steering wheel of an automobile. In this position, the watch cannot be read without rotating the wrist until the watch is in substantially a horizontal plane. This necessitates at least loosening the grip on the steering wheel, or releasing it entirely, with attendant danger.

Makers and repairers of watches, while working on a watch, generally hold the watch so that their wrists are substantially vertical. They accordingly experience considerable inconvenience in using conventional wrist watches, as they must of necessity frequently consult their own watches while repairing others. To do so, they must let go of the watch being repaired or adjusted, and turn their wrists to the horizontal in order to read the time. Considering the fragility of a watch and the minuteness of adjustments thereto, it may readily be seen that the necessity of releasing the watch with one hand is a source not only of inconvenience to the wearer, but also of possible damage to the watch.

15 From these examples, it will now appear that my above-described watchcase offers many advantages of visibility and convenience heretofore unattainable.

20 With the watch strapped in the position shown in Figure 4, crystal 26 is less liable to breakage from hitting against various objects. For example, if the arm is swinging by the side, direct outward movement of the arm against a wall, for example, would not result in breakage of the crystal, because the general plane thereof is offset from the plane of the wall. Similarly, if the wearer were facing the wall, and swung his arm thereagainst, the crystal would still be protected because its plane is still inclined from the plane of the wall.

As hereinbefore noted, the hand is most massive adjacent the third joint of the thumb and knuckle of the first finger, this part of the hand also being much firmer than the other, or little finger side. Hence, where a wrist watch and strap are attached to an extensible buckle of the type shown in my above-noted patent, positioning of the watch on the wrist by passing the hand through the bracelet necessitates collapsing the hand as far as possible without discomfort and edging the bracelet thereover. It should be noted, however, that when a watch housed in a curved case such as hereinabove described is put on, it may readily be slipped over the hand by reason of the variable radius curve of the case, the sharper portions of the curving conforming generally to the contour of the heavier knuckle joint of the index finger and readily slipping thereover.

Furthermore, when a watch housed in my above-described case is in the described position on the wrist, it fits snugly thereon and does not impede movement of the shirt or coat cuff, and rests comfortably against the wrist because it conforms to the curve thereof, this not being true wherein a flat or curved case of constant radius is used. As strap 15 (Figure 4) is preferably shorter than strap 16, buckle 17 rests in proper position on the bottom of the wrist where it is readily accessible to the wearer.

Accordingly I have provided a watchcase which fulfills the several objects set forth above in a thoroughly practical and efficient manner.

As many possible embodiments may be made of the above invention and as many changes might be made in the embodiment above set forth, it is to be understood that all matter hereinbefore set forth, or shown in the accompanying drawing, is to be interpreted as illustrative and not in a limiting sense.

I claim:

1. As an article of manufacture, a watchcase including portions curved to follow the cross-sectional curve of a wrist, said portions including a

5 section having slight curvature and a section
having substantial curvature, said section of
slight curvature conforming to the curvature of
the top surface of said wrist and said section of
substantial curvature conforming to the curva-
10 ture of the inner side portion of said wrist,
whereby, when said case is secured to a wrist,
said wrist-conforming sections retain the face of
said case substantially at the juncture point be-
tween the inner side portion and top surface of
said wrist by preventing the rotation of said case
therearound.

substantially flat section to a substantially curved
section, said substantially flat section being
adapted to conform to the cross-sectional shape
of the top portion of a wrist, and said substan-
tially curved section being adapted to conform 5
to the cross-sectional shape of the inner side of
said wrist, whereby, when said case is secured to
a wrist, said wrist-conforming sections retain the
face of said watch substantially at the juncture
point between the top portion and inner side of 10
said wrist by preventing the rotation of said case
therearound.

2. As an article of manufacture, a watchcase
including two or more sections varying from a

EUGEN PRESTINARI.