

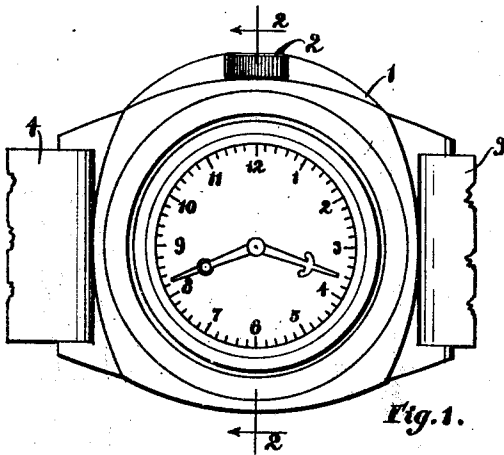
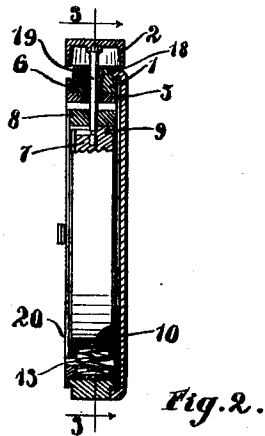
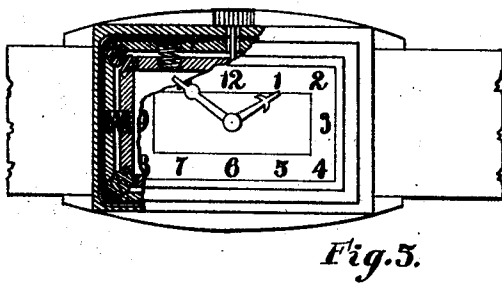
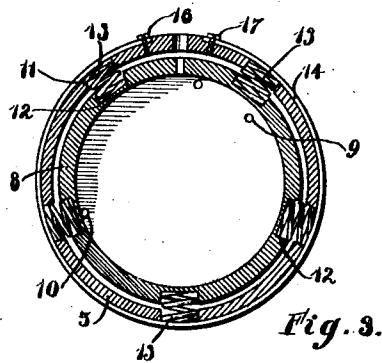
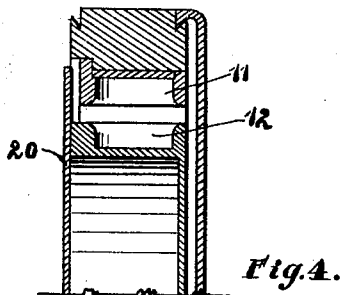
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O. GRUBER

1,786,061

WATCHCASE

Filed Nov. 30, 1928



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WATCHCASE

Application filed November 30, 1928. Serial No. 322,775.

My invention relates to a watch case wherein the watch mechanism is subjected to vibrations, shocks, and the like.

These vibrations and shocks affect the accuracy of the watch mechanism, and it is one of the objects of this invention to provide shock absorbing and cushioning means between the watch mechanism and the outer casing for protecting the watch mechanism from the vibrations and shocks.

The accompanying drawings illustrate one embodiment of my invention, wherein:

Figure 1 is a front elevation.

Figure 2 is a cross section of Figure 1 on line 2—2.

Figure 3 is a cross section of Figure 2 on line 3—3, showing the annular inner ring and the inner dust proof casing.

Figure 4 is a cross section showing the springs removed and the outwardly tapered apertures; and

Figure 5 is a front elevation, partly in cross section, of a rectangular shaped time piece.

In Figures 1 and 2, which illustrate one form of wrist watch, the outer casing 1 has straps 3 and 4 secured thereto. The annular ring 5 is snugly secured to the casing 1 by means of the shoulder 6 and screws, or the like. The time indicating mechanism 7 is arranged in an inner dust proof casing 8 and secured thereto by means of screws 9 and 10. In the annular ring 5 there are a plurality of apertures 11 and oppositely disposed thereto in the inner dust proof casing 8 are a plurality of recesses 12. The inner casing 8 is spacedly held from the annular ring 5 by means of springs 13 in the apertures 11 and recesses 12. The apertures in the annular ring and the recesses in the inner casing may be inwardly tapered, as shown in Figure 4, to permit free movement of the springs. The springs 13 are held in the annular ring 5 by means of a strap 14 fastened to the ring by the screws 16 and 17. The aperture 18 in the outer casing 1 and the annular ring 5 through which the stem 19 of the watch passes is sufficiently large to permit free movement of the stem, and the crown 2 of the winding stem is

spacedly arranged from the outer casing to permit its free movement.

The dial 20, as shown in Figure 2, may fit snugly against the watch mechanism and extends only to the outer periphery of the inner dust proof casing, or, as shown in Figure 4, it may extend over the outer periphery of the casing on the outer surface of the annular ring 5, with enough space between the dial and the outer casing to permit free movement of the watch mechanism.

In a rectangular or square-shaped time piece the resilient members are preferably arranged at the corners, as shown in Figure 5.

I do not restrict myself to the exact arrangement of springs between the inner ring and casing, but may utilize resilient means otherwise arranged to accomplish the results set forth.

I claim:

1. In a watch case having a removable casing, a removable ring secured thereto, said ring having a plurality of spacedly disposed apertures therein, an inner casing having a time indicating mechanism secured therein, said inner casing having a plurality of recesses in said inner casing disposed opposite the apertures in said ring, and resilient means in each of said apertures and the oppositely disposed recesses.

2. A watch case comprising an outer casing, a removable inner ring secured thereto having a plurality of spacedly disposed apertures therein, an inner casing spacedly arranged from said inner ring having a plurality of recesses therein disposed opposite the apertures in said ring, a time indicating mechanism secured in said inner casing, spring means in each of said apertures and the oppositely disposed recesses, a dial for said time indicating mechanism disposed on said inner casing, and means for winding and setting said time indicating mechanism.

3. A watch case comprising an outer casing, a removable inner ring secured thereto having a plurality of spacedly disposed apertures therein, an inner casing spacedly arranged from said inner ring having a plurality of recesses therein disposed opposite the apertures in said ring, a time indicating mechanism

nism secured in said inner casing, resilient means in each of said apertures, and the oppositely disposed recesses, means on the outer periphery of said ring for holding said resilient means in position, a dial for said time indicating mechanism disposed on said inner casing and means for winding and setting said time indicating mechanism.

4. A watch case comprising an outer casing, a removable inner ring secured thereto having a plurality of spacedly disposed apertures therein, an inner casing spacedly arranged from said inner ring having a plurality of recesses therein disposed opposite the apertures in said inner ring, a time indicating mechanism secured in said inner casing, spring means in each of said pairs of apertures, means on the outer periphery of said ring for holding said springs in position, a dial for said time indicating mechanism disposed on said inner casing, winding and setting means for said time indicating mechanism having a stem and a crown, said stem projecting through an aperture in said outer casing, and said stem aperture having a cross section larger than the cross section of the stem for permitting free movement of the stem.

5. A watch case comprising an outer casing having a plurality of spacedly disposed recesses in its inner periphery, an inner casing spaced inwardly from said outer casing and having a plurality of recesses in its outer periphery disposed opposite the recesses in said outer casing, time indicating mechanism disposed in said inner casing, and resilient means in each of said oppositely disposed pairs of recesses.

6. In a watch, a watch case, an outer member adapted to be mounted in said watch case and having a plurality of apertures there-through, removable means covering the exterior of said apertures, an inner member adapted to receive a watch movement and having recesses therein to register with the apertures in said outer member, said inner member being spaced inwardly from said outer member and from said watch case, and resilient means mounted in each aperture and the oppositely disposed recess to resiliently support said inner member and a watch movement mounted therein.

7. In a watch case, an outer frame member having a plurality of radially disposed recesses therein and having an enlarged aperture to receive a stem, an inner frame member adapted to receive a watch movement and having a plurality of radially disposed recesses therein to register with the recesses in the outer frame member and having a small aperture to receive a watch stem, a stem operatively connected to a watch movement mounted in said inner frame member, said stem passing through the apertures in said inner and outer frame members to be free for

lateral and longitudinal movement in the aperture in the outer frame member, and resilient means mounted in each recess in the outer frame member and the registering recess in the inner frame member.

In testimony whereof I affix my signature.

OSCAR GRUBER.

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