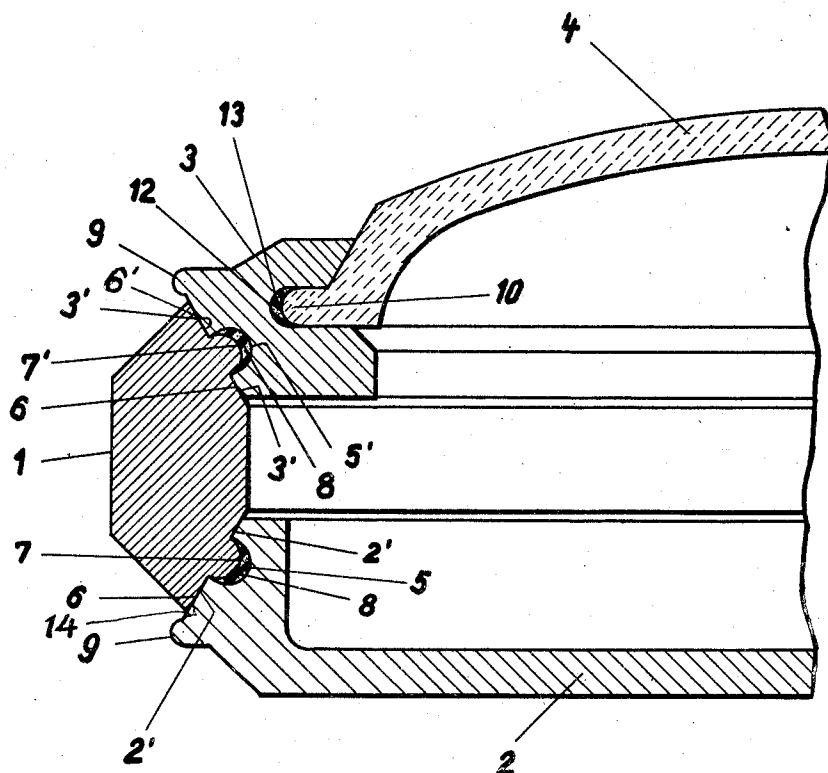


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WATERTIGHT WATCHCASE

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WATERTIGHT WATCHCASE

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3 Claims. (Cl. 58—90)

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The present invention relates to water-tight cases and is especially concerned with an assembly of the case components to prevent the entrance of water and dust therein. Cases of the present type are particularly desirable for use as watch cases, instrument cases and where it is desirable to prevent the entrance of moisture or dust which would be detrimental to the contents of the case, such as the watch mechanism.

The principal object of the present invention is to provide a case having a case band and a rim for the crystal and a back cover which rim and cover are detachably connected on said case band in a water tight and dust proof assembly.

In the drawing there is shown a partial cross-sectional view of the details of the respective members of a case according to the present invention.

Referring now more particularly to the accompanying drawing, an annular case band 1 is shown with a detachable back cover 2 and a rim 3 for a crystal 4 attached to said band 1. The peripheral edge of back 2 has an inclined face 2¹ formed therewith and rim 3 also has an inclined peripheral face 3¹ but said faces 2¹ and 3¹ are formed extending in opposite directions. Further face 2¹ has an annular groove 5 formed therein while face 3¹ has a similar annular groove 5¹ provided therein.

Case band 1 has a pair of oppositely directed inclined faces 6 and 6¹ formed upon its interior side. Faces 6 and 6¹ extend substantially at 60 degrees as are faces 2¹ and 3¹ whereby face 2¹ will fit tightly against face 6 of band 1 and face 3¹ of rim 3 will fit tightly against face 6¹ when the case is assembled.

Faces 6 and 6¹ of band 1 each have an annular flange 7 and 7¹ respectively extending outwardly from said faces. Said flanges 7 and 7¹ are formed for fitting into grooves 5 and 5¹ respectively of the back 2 and rim 3.

A resiliently compressible packing ring 8, for example a thin rubber ring, is inserted into the base of each of the grooves 5 and 5¹.

Crystal 4 is formed of an unbreakable glass such as is well known in the trade and is carried in a water tight assembly with the rim or bezel 3. Said crystal has an outwardly extending flange 10 which is formed for fitting into a corresponding groove 12 provided within the base of a notch of said rim 3. A packing ring 13 is mounted within the groove 12 and said ring is made of a resiliently compressible material, for example rubber.

The case is assembled by forcing rim 3 into position across band 1 placing face 6¹ and 3¹ together with flange 7¹ in groove 5¹. Due to the resiliency of said rim, it will snap into a fastened position. Similarly back 2 is positioned across the lower edge of band 1 placing face 2¹ against face 6 and flange 7 within groove 5. Back 2 is also resilient and will likewise snap into its fastened position. Said back 2 is provided with a narrow slot 14 underneath projection 9 whereby

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a tool can be inserted for removing the said back from said band 1.

Crystal 4 is mounted across rim 3 by inserting flange 10 within groove 12 while said crystal is in a warm condition. Thus the crystal 4 has a water tight and dust proof connection with rim 3 and back 2 and rim 3 for a similar connection to case band 1.

Having now fully described and ascertained the nature of my said invention and in what manner the same may be performed, I declare that what I claim is:

1. A water-tight assembly for cases, comprising a case band having a pair of oppositely inclined inner faces, a pair of flanges each formed extending from one of said inclined faces, a rim for a case crystal having an inclined outer face, said rim face having a groove for receiving the flange of one of said band faces, a back cover having an inclined outer face, and said cover face having a groove for receiving the flange of the other of said band faces.

2. A water-tight assembly for cases, comprising an annular case band having a pair of spaced oppositely inclined inner faces, each of said band faces having a flange formed extending therefrom, a rim for a case crystal having an annular inclined peripheral face formed for closely fitting against and within one of said band faces, said rim face having an annular groove formed therein for receiving the flange of the contacting band face, a back cover having an annular inclined peripheral face formed for closely fitting against and within the other of said band faces, and said back cover face having an annular groove formed therein for receiving the flange of the contacting band face.

3. A water-tight assembly for cases, comprising a case band having a pair of oppositely inclined inner faces, each of said band faces having a flange formed extending therefrom, a rim for a case crystal having an inclined outer face formed for contacting one of said band faces, said rim face having a groove for receiving the flange of the contacting band face, a back cover having an inclined outer face formed for contacting the other of said band faces, said cover face having a groove for receiving the flange of the contacting band face and a pair of packing rings each extending around one of said flanges and in the corresponding groove.

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The following references are of record in the file of this patent:

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