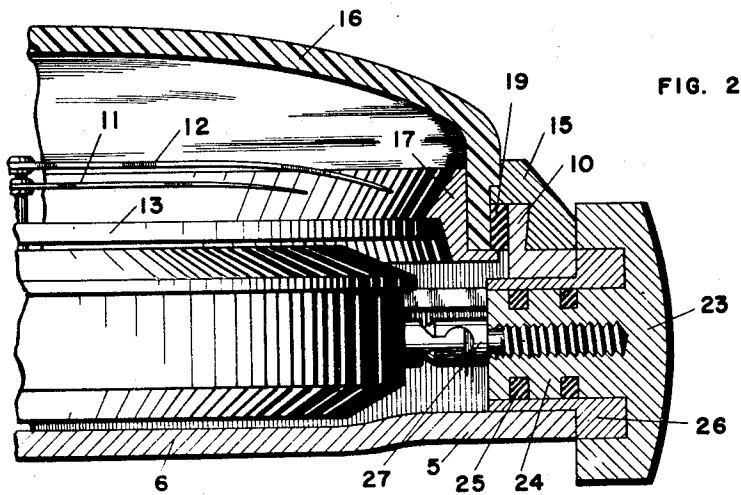
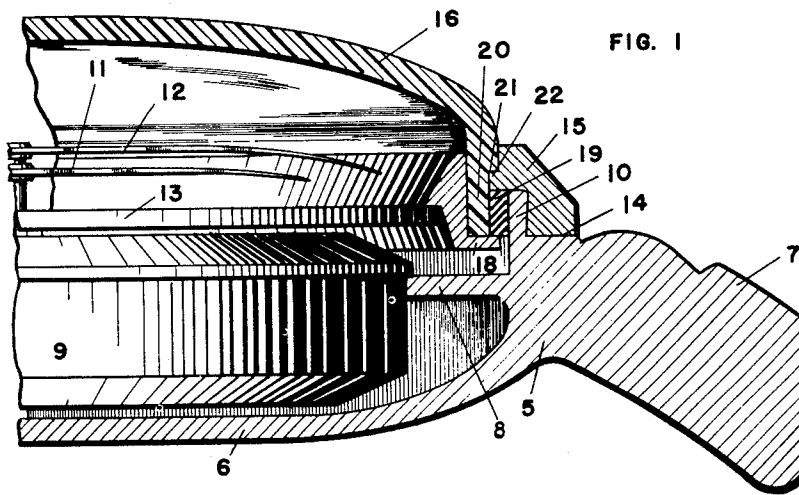


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H. E. VERMOT
WATERPROOF WATCHCASE

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WATERPROOF WATCHCASE

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1 Claim. (Cl. 58—90)

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This invention relates to a watchcase sealed against the entrance of moisture and dirt.

The object of the present invention is to provide a watchcase adapted to easily receive the watch movement and through the medium of a sealing ring secure the crystal so as to prevent the entrance of moisture or dust.

A further object of the present invention is to provide a case having an integral back, and formed with a movement supporting internal rim and an upstanding collar to receive and support a bezel for holding and locking a gasket sealing crystal in place.

It is a further object of the present invention to provide a crown adapted to slide within a sleeve and provided with packing rings to insure a sealed fit between said sleeve and said crown.

With the foregoing and other objects in view, the invention resides in the novel arrangement and combination of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein described may be made within the scope of what is claimed without departing from the spirit of the invention.

The invention is shown in the accompanying drawing in which:

Figure 1 is a partial cross-sectional view.

Figure 2 is a similar view taken at right angles to Figure 1 and showing the construction of the crown.

Referring particularly to the drawing, 5 represents the movement case which has an integral back 6 and lugs 7 to receive the ends of the strap (not shown). The case is formed with an annular flange 8 to support the movement 9 and an upstanding annular rim 10.

The movement 9 forms no particular part of this invention and is shown here merely in outline form and is provided with the usual hour and minute hands 11 and 12 respectively and a dial 13.

Adjacent to the upstanding rim 10 is an annular shoulder 14 to receive and seat a bezel 15 which engages and firmly holds in place a crystal 16. Between the crystal 16 and the movement is a reflector 17 which is seated on the dial 13 and underlies the crystal at 18.

The sealing is accomplished by means of a rubber gasket 19 which engages a reduced por-

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tion 20 of the crystal and the interior side wall of the upstanding rim 10. The reduced portion 20 of the crystal forms a shoulder 21 which coacts with a tongue 22 of the bezel 15. These parts are ground to very close tolerance to provide an exact and sealing fit, the bezel ring being made slightly smaller than the upstanding rim 10 to provide a slight pressure against the sealing gasket 19 when snapped into place.

Referring particularly to Figure 2, the crown 23 has an integral cylindrical extension 24 which is grooved annularly to receive packing rings 25. A sleeve 26 which is soldered to the case 5 is accurately machined that a very tight fit is provided between the cylindrical extension 24 of the crown 23 and said sleeve. The ordinary divided winding stem 27 is threaded into the crown.

In assembling the watch, the movement is placed in the case resting on the annular flange 8. The reflector ring 17 is then placed in position. The bezel is fitted to the crystal and the rubber ring snapped in position, shown in Figure 1, holding the bezel in position. The entire unit is then snapped in place, the bezel 15 fitting over the upstanding rim 10 and seating on the annular shoulder 14. The parts interfitting here are machined to very close tolerance and the fit between the crystal and the upstanding rim 10 is a close one. Application of the bezel 15 to the upstanding rim 10 provides a slight pressure inward on said rim which firmly holds the packing ring against the crystal, the crystal being reinforced on the inside against any inner giving against the reflector ring 17.

Thus it will be seen that there is a compression on the rubber sealing ring 19 and that the watchcase is provided with a simple one piece sealing ring and can be removed at will by simple ordinary tools which are available to the general watchmaker.

What is claimed is:

A sealed watchcase construction comprising a one piece case formed with an annular movement supporting flange and an annular upstanding rim, a crystal, a downwardly depending flange formed on said crystal, said flange having an annular shoulder, a rubber sealing ring carried exteriorly of said crystal flange and below said shoulder, said crystal and ring being fitted inwardly of said upstanding rim, the diameters of said crystal and said rim being such as to compress the rubber

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sealing ring between the two, a reflector ring bearing against the inside of said crystal flange and underlying said flange and said rubber sealing ring and a bezel fitting around the outside of said annular case rim, part of said bezel overlying said rim and said sealing ring and bearing against the inner side of said crystal flange, a shoulder being formed on said bezel for interfitting with the shoulder of said crystal flange, the diameter of said bezel being such as to slightly force the annular case rim inwardly.

HENRI EDMOND VERMOT.

REFERENCES CITED

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

4

UNITED STATES PATENTS

Number	Name	Date
1,838,790	Schwob -----	Dec. 29, 1931
2,392,787	Vermot -----	Jan. 8, 1946
2,446,603	Morf -----	Aug. 10, 1948

FOREIGN PATENTS

Number	Country	Date
197,031	Switzerland -----	July 1, 1938
217,284	Switzerland -----	Feb. 2, 1942
262,020	Switzerland -----	Sept. 16, 1949
362,229	Great Britain -----	Dec. 3, 1931