

(No Model.)

E. F. HEFFERNAN.

WATCH CASE.

No. 384,623.

Patented June 19, 1888.

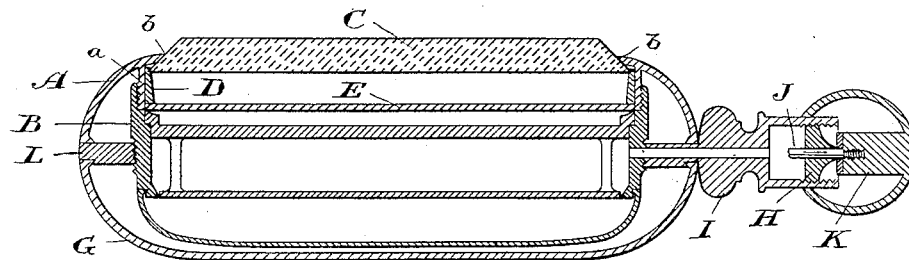


Fig. 1.

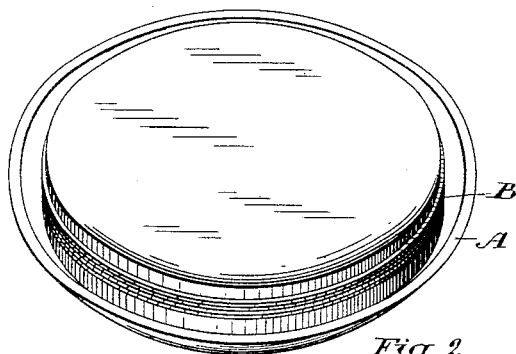


Fig. 2.

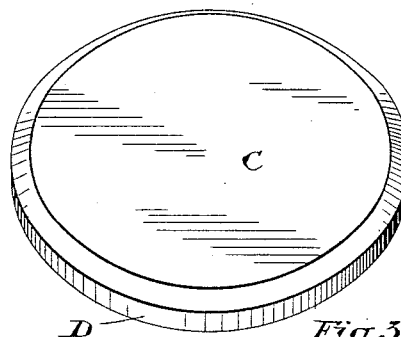


Fig. 3.

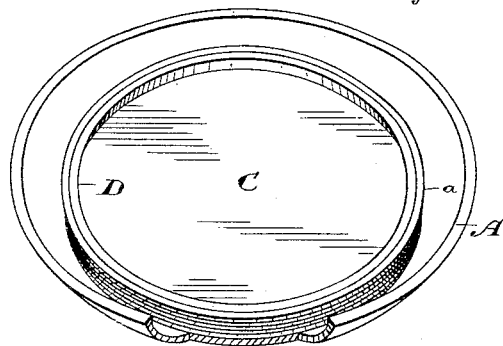


Fig. 4.

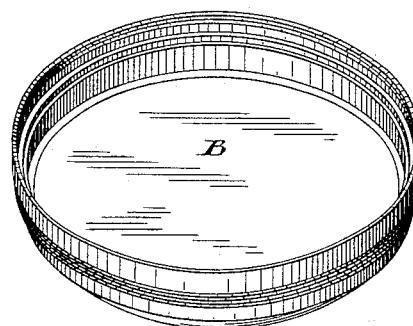


Fig. 5.

Witnesses.

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Att'y

# UNITED STATES PATENT OFFICE.

EDWARD F. HEFFERNAN, OF TORONTO, ONTARIO, CANADA.

## WATCH-CASE.

SPECIFICATION forming part of Letters Patent No. 384,623, dated June 19, 1888.

Application filed February 27, 1888. Serial No. 265,406. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD FRANCIS HEFFERNAN, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, watch-case maker, have invented a certain new and useful Improvement in Watch Cases, of which the following is a specification.

The object of the invention is to construct a simple dust and water proof watch-case; and it consists, essentially, in forming on an open-faced back or cover an annular wall extending from a point near the edge of the opening and screwed on its outer circumference to fit a thread formed on the inner circumference of the movement-ring, the dial-glass being fitted within the annular wall to butt against the edge surrounding the opening in the back, and having an inwardly-projecting flange to butt against the dial-plate when the movement-ring is screwed into the front cover, the back cover being snapped or screwed onto a ring screwed onto the movement-ring or onto the front cover, and a cone shaped plug being screwed into the pendant and made to fit snugly the winding-stem, the crown of which butts against the apex of the cone-shaped plug, substantially as hereinafter more particularly explained.

Figure 1 is an enlarged sectional elevation through the pendant. Fig. 2 is a perspective detail of the movement-ring with the bezel and glass in position. Fig. 3 is a perspective detail of the glass and glass-ring. Fig. 4 is a detail of the bezel with the glass in position. Fig. 5 is a perspective detail of the movement-ring.

A represents the front cover, and *a* an annular wall extending from a point near the opening in the front cover. A screw is formed on the outer circumference of the annular wall *a*, and is designed to screw into a thread formed on the inner circumference of the movement-ring B. The glass C is fitted into or forms part of a ring, D, projecting below the inner surface of the glass, so that when it butts against the dial E sufficient room is left for the free movement of the hands. The glass C is fitted within the annular wall *a* and butts against the edge *b*, formed around the opening in the front cover. It follows, therefore, that when the movement-ring is screwed onto the annular wall *a* the glass C or its ring is pressed

against the edge *b*, and the inner edge of the ring D is forced against the dial-plate E, so that dust and water proof joints are formed at both joints named. A ring, L, (see Fig. 1,) is screwed onto the outside of the movement-ring B, so that it will butt against the edge of the front cover, and on its opposite edge I screw or snap the back cover, G.

Instead of screwing the ring L onto the outside of the movement-ring B, I sometimes snap or screw the back cover upon the front cover, A, so as to form a substantially dust and water proof joint between the two; but should any dust or water find its way through the said joint it will simply fall into a receptacle surrounding the annular wall *a*, and as the other joints already specified are absolutely dust and water tight nothing can possibly find its way into the movement. A cone shaped plug, H, is screwed into the pendant I, and a hole is made in the said plug to receive the stem J. This plug being screwed tightly into the pendant, no dust or water can pass between the two, and although the stem fits the hole in the plug snugly I provide a soft seat, made of rubber or other suitable material, on the inner surface of the crown K, so that when the stem is in its normal position for winding the watch the seat formed on the crown butts against the plug H and effectually closes the joint between it and the stem.

What I claim as my invention is—

1. An open-faced cover having an annular wall extending from a point near the inner edge of the opening, and screw-threaded on its outer circumference to fit a thread formed on the inner circumference of the movement-ring, in combination with the dial-glass fitted within the annular wall to butt against the inner edge of the opening, and having an inwardly-projecting flange to butt against the dial-plate when the movement-ring is screwed into the open-faced cover, substantially as and for the purpose specified.

2. A movement-ring screwed into an annular wall formed around the opening in the open-faced cover, and having a thread cut on its outer circumference to receive a ring screwed onto it to butt against the edge of the front cover, in combination with a back cover screwed or snapped onto the said ring, so as

to inclose the space surrounding the annular wall, substantially as and for the purpose specified.

3. A cone-shaped plug, H, screwed tightly  
5 into the pendant I, and having a hole through it to fit the stem J, in combination with a cap or crown, K, having a soft seat formed on its

inner surface, substantially as and for the purpose specified.

Toronto, February 16, 1888.

EDWARD F. HEFFERNAN.

In presence of—

CHARLES WRIGHT CLINTON BALDWIN,  
CHARLES HENRY RICHES.