May 31, 1960 P. R. VOGEL 2,938,327

ILLUMINATED WATCH

Filed April 22, 1958

Fig. 1

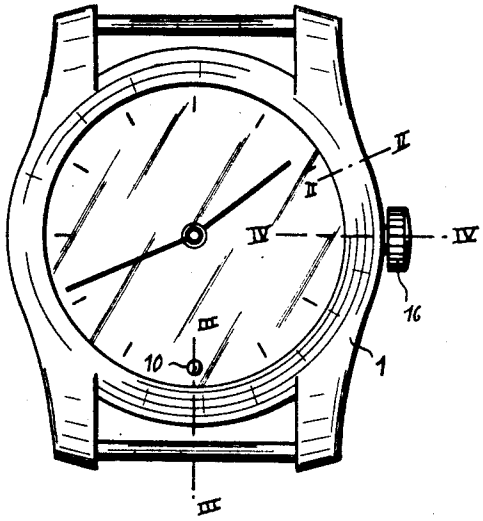


Fig. 2

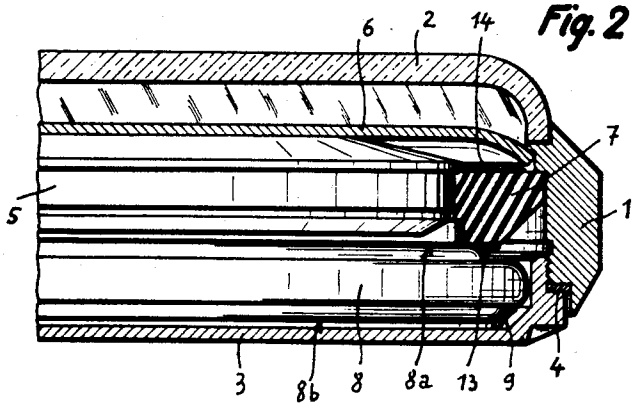


Fig. 3

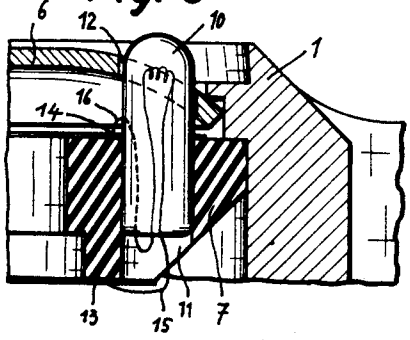
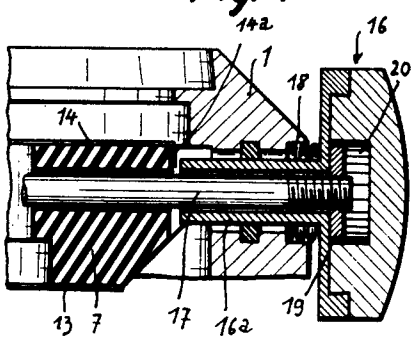


Fig. 4



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ILLUMINATED WATCH

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1 Claim. (Cl. 58—50)

The present invention relates to an illuminated watch comprising an electric bulb which is supplied with current from a battery.

This watch is characterised in that it comprises a circuit-breaker means in the feed circuit of the said bulb, controlled by the winding crown, the latter being mounted so as to be movable axially on its stem, and the whole arrangement being such that by pressing on the said crown, the bulb is lit up.

One form of embodiment of the subject of the invention is illustrated by way of example in the accompanying drawings.

Figure 1 is a plan view of a wrist-watch provided with an electric bulb.

Figure 2 is a sectional view on a larger scale taken on the line II—II of Figure 1.

Figure 3 is a partial sectional view on a larger scale, taken on the line III—III of Figure 1, and,

Figure 4 is a partial sectional view, also on a larger scale, taken on the line IV—IV of Figure 1.

The watch illustrated comprises a case formed of a middle-bezel **1**, in which is fixed the glass **2**, and a cover **3** which is screwed into the middle-bezel with the interposition of a packing ring **4**. The work **5** of this watch, provided with a dial **6**, is fixed in the case through the agency of a mounting frame or ring **7** made of electrically insulating material. An electric battery **8** is lodged underneath the said work, between the latter and the cover **3**. The battery bears on the one hand against the mounting frame **7** and on the other hand against the cover **3** with the interposition of an annular spring **9**.

The mounting frame **7** which is made of insulating material, carries an electric bulb **10** mounted in a hole **11** (Figure 3) and extending through an aperture **12** in the dial. The frame **7** also carries two metal rings **13** and **14**, constituting the conductors for supplying current to the bulb **10**. The ring **13** is mounted on the face of the frame **7** which faces towards the cover and the ring **14** on the face which is situated adjacent the dial, but

this ring **14** is spaced from the works also mounted on the frame **7**. The two wires **15** and **16** which issue from the bulb **10** are connected respectively to the rings **13** and **14**.

The electric battery **8** is so designed that one of its poles is connected to its upper face **8***a* whilst the other pole is connected to its lower face **8***b*. The face **8***a* is in contact with the ring **13** of the mounting frame **7**, whilst the face **8***b* is in contact with the spring **9** and consequently with the body constituted by the case and movement of the watch.

The ring **14** can be connected electrically to the body owing to the fact that the winding crown **16** is mounted so as to be movable axially on its stem **17**. When pressure is exerted on the said crown, the end of the tubular shank **16***a* of the crown **16** comes into contact with a folded-over flange **14***a* on the ring **14** and thus closes the feed circuit for the bulb, which lights up. A coil spring **18** is interposed between the crown **16** and the case part **1** so as to urge the crown into the position in which the feed circuit of the bulb is open. Finally, it should be noted that although the crown is movable axially on the stem **17**, the crown is fast therewith in the angular sense by means of a grooved head **19** which is fixed on the stem **17** and which is lodged in a correspondingly shaped internal cavity **20** formed in the crown.

The rings **13** and **14** constituting the conductors supplying current to the bulb **10** can either be fitted on to the mounting frame **7**, or may be constituted by printed circuits.

What I claim is:

In an illuminated watch comprising an electric bulb the feed circuit of which is supplied with current from a battery, a case, a clockwork in said case, a winding stem, a winding crown axially movable on said stem but angularly rigid therewith, a tubular shank rigid with said crown, a mounting frame surrounding said clockwork, said frame consisting of insulating material on which said bulb is fixed, and two conductors whereby current is supplied to the said bulb, one conductor being connected to one of the poles of the said battery and the other being an extension situated opposite said shank of the said crown in such a manner that the said shank comes into contact with the said extension and thus closes the feed circuit of the electric bulb when pressure is exerted on the crown, the second pole of the battery being itself connected electrically to the body formed by the said case and by the said clockwork.

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