WATCH WINDING AND HAND SETTING MEANS

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There are certain watches which possess a winding mechanism usually consisting of rings or crowns which can be turned about the geometrical axis of the hands, in a plane parallel to that of the dial. These rings or crowns are usually arranged so as to be able to effect a translatory movement perpendicular to the face of the dial, so as to act on a mechanism for setting the hands.

The regulation of the rings and crowns in question is insufficiently accurate for the said pieces to be used in the construction of every kind of clock-work. For instance, it would not be advisable to use such pieces in bracelet watches, for not only would the aesthetic aspect of the watch be badly affected by a like adjunction, but also the extra amount of space they would take up would render the watch unsaleable.

The same is to be said of pendant watches, the thickness of which has to be taken into practical consideration.

The present invention relates to a bracelet watch with a mechanism by which the winding can be effected by means of a member which can be rotated concentrically to the axis of rotation of the hands, and which is characterised by a hand-setting device having a piece of which the displacement about the axis of rotation of the watch imparts a rectilinear translatory motion to the stem in order to bring the latter into the desired positions. To this end a special ring can be used, which is carried in a groove formed by the back and the bezel of the watch case. A case-band could also be placed in the said groove, by means of which the said movement of the winding stem could be effected.

The attached drawing shows, by way of example, two embodiments of a watch according to the present invention. In the present example, a bracelet watch will be described.

Fig. 1 is a diametrical section through the first embodiment.

Fig. 2 is a view part in section along the line II—II, of the same.

Fig. 3 is a diametrical section of the second embodiment.

Fig. 4 is a plan view of the bracelet watch.

In the watch represented in Fig. 1, the movement 6 is held in a housing 2 made integral with the bezel 1. The back 4 has a threaded raised edge 5 which screws into a thread in the housing, with the purpose of holding the movement firmly in place between the two mentioned parts of the watch-case.

The bezel 1 and the back 4 have their edges projecting beyond the outside cylindrical surface of the housing, forming in this way a groove in the periphery of the watch-case, in which a toothed ring 8 meshing with a pinion 19 mounted on the winding stem 11 is adjusted. The case-band 12 and a ring 14 for setting the hands are likewise placed in the said groove. This ring carries a hand-setting member 18, in the shape of an angle, which is fixed to the said ring 14 by means of screws 21; the cam part 20 lying perpendicular to the dial of the watch projects into a space between the pinion 19 and the collet 16, mounted on the winding stem. This part 20 of the hand-setting member is curved with varying radii from one end of the curve to the other, so that when the ring 14 is rotated through a certain angle, the winding stem receives a rectilinear translatory movement which brings it into one or the other of its positions, i.e., the hand setting position or winding position, dependent on whether it cooperates with one end or the other of the part 20 of the hand-setting member.

The ring 8 can be very accurately adjusted in the groove formed between the bezel and the back, so that any wear due to manipulation will be negligible, this mechanical arrangement being very robust and more than sufficient to support the usual wear and tear a bracelet watch will undergo.

In the second embodiment according to Fig. 3, the hand-setting member 15 is fixed to a ring integral with the case-band 12; its part 20 is likewise disposed beneath the pinion 17 of the winding stem and its course is limited by stops 19 planted in the annular housing 2.

In the present case, too, the different parts contained in the groove can have such dimensions as to form a perfect mechanical whole.

What I claim is:

1. In a watch a movement-carrying housing, a bezel, a back, an outer annular groove limited at its sides by said bezel and said back and at its bottom by said housing, a movement mounted on said movement-carrying member, a hand-rotatably mounted on said movement, a winding stem, elements provided on said winding stem at a distance from one another, a winding means coupled with said winding stem and mounted in said groove rotatably about the axis of rotation of said hands, a caseband and being rotatable about the axis of rotation of said hands and surrounding said housing, a hand-setting cam member fixed
3. In a watch, a movement-carrying housing, a bezel, a back, an outer annular groove limited at its sides by said bezel and said back and at its bottom by said housing, a movement mounted on said movement-carrying housing, hands rotatably mounted on said movement, a caseband provided in said groove, a winding stem, a pinion fixed to said winding stem, an element fixed to said winding stem at an axial distance from said pinion, a toothed winding ring engaging said pinion, mounted in said groove at the one side of said caseband and being rotatable about the axis of rotation of said hands, a hand-setting ring mounted in said groove at the other side of said caseband and being rotatable about the axis of rotation of said hands and surrounding said housing, and a hand-setting member fixed to said hand-setting ring and comprising a cam part projecting into the space between said pinion and said element so as to impart an axial movement to said winding stem on rotation of said hand-setting ring.

4. In a watch, a movement-carrying housing, a bezel, a back, an outer annular groove limited at its sides by said bezel and said back and at its bottom by said housing, a movement mounted on said movement-carrying housing, hands rotatably mounted on said movement, a winding stem, a pinion fixed to said winding stem, an element fixed to said winding stem at an axial distance from said pinion, a toothed winding ring engaging said pinion, mounted in said groove rotatably about the axis of rotation of said hands, a caseband disposed in said groove at the one side of said toothed winding ring and being rotatable about the axis of rotation of said hands, and an angle-shaped hand-setting member fixed to said caseband and comprising a side part projecting into the space between said pinion and said element so as to impart an axial movement to said winding stem on rotation of said hand-setting ring.

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