

PATENT SPECIFICATION

(11) 1 343 541

1 343 541

- (21) Application No. 33558/71 (22) Filed 16 July 1971
 (31) Convention Application No. 66508 (32) Filed 31 July 1970 in (19)
 (33) Japan (JA)
 (44) Complete Specification published 9 Jan. 1974
 (51) International Classification G04B 27/02
 (52) Index at acceptance G3T A10C1 C1A C1B



(54) TIMEPIECE

(71) We, KABUSHIKI KAISHA SUWA SEIKOSHA, a Japanese company, of 3—4, 4-chome, Ginza, Chuo-ku, Tokyo, Japan, do hereby declare the invention for which we pray that a patent may be granted to us, and the method by which it is to be performed to be particularly described in and by the following statement:—

This invention relates to timepieces.

According to the present invention there is provided a timepiece comprising: a base member; a stem having a plurality of grooves therein to enable the stem to be set in one of a plurality of longitudinal positions; and a resilient member fixed at one end to the base member and having another end which engages one of the grooves in the stem and biases the latter towards the base member to retain the stem in one of said positions.

The timepiece may include an L-shaped part at said another end of the resilient member for guiding the stem for movement in a direction parallel to its axis.

The resilient member may have first means for guiding the stem in a longitudinal direction.

The timepiece may include second means for preventing rotation of said resilient member about said one end.

Said second means may comprise a member rigidly attached to the base member and having a recess therein for receiving said another end of the resilient member.

The invention is illustrated, merely by way of example, in the accompanying drawings, in which:

Figure 1 is a plan view of a conventional stem setting mechanism of a watch;

Figure 2 is a cross-section of the stem setting mechanism of Figure 1;

Figure 3 is a plan view of a stem setting mechanism of a timepiece according to the present invention; and

Figures 4 and 5 are partial cross-sections of the stem setting mechanism shown in Figure 2.

[Price 25p]

Referring to Figures 1 and 2 there is shown a conventional stem setting mechanism of a watch. This mechanism comprises a setting lever 1 on which is mounted a pin 2. The pin 2 is engaged in a groove in a stem 3. As shown in Figure 2, the stem is positioned by a plate 5.

The defects of the conventional stem setting mechanism are as follows:

1. The clearance between the stem and the plate 5 in the radial directions is comparatively large.

2. The stem setting mechanism 1 is positioned by grooves in a spring lever 1', with the result that the stem is subject to axial play.

3. It is difficult to form the pin 2 by pressing out of the setting lever 1.

4. The stem setting mechanism occupies a considerable volume.

5. It is difficult to provide a side hole in the plate 5 for the stem to pass through and so it is hard to manufacture the conventional stem setting mechanism with a high degree of precision.

Referring to Figures 3 to 5, there is shown a stem setting mechanism of a timepiece, e.g. a watch, according to the present invention. This stem setting mechanism comprises a resilient stem holder 6 which acts as a holding member for a stem 7 and which is provided with an L-shaped part 9 which engages in diametrically opposite sides of one of a plurality (three shown in Figure 3) of grooves 8. The stem holder 6 also carries two L-shaped parts 10, 11 for guiding the stem 7 in a longitudinal direction.

The stem holder 6 has a further L-shaped part 14 adapted to be engaged in a recess 13 of a member 12 fixed to a base plate 16. The stem holder 6 is retained on the base plate by a screw 15 so that it resiliently biases the stem towards the base plate.

The stem 7 is settable in one of three positions determined by the L-shaped part 9 being engaged in a respective one of the grooves 8. The L-shaped part 14, engaged in

Price 75p

the recess 13, prevents the stem holder from rotating about the screw 15.

Compared with the conventional stem setting mechanism that of the present invention has the following advantages:

1. The clearance between the stem and the base plate is relatively small.

2. The play of the stem in the axial direction is small.

3. The stem setting mechanism has no separate spring part, the resiliency of the mechanism being from the stem holder itself; furthermore, there is no pin to be formed by pressing from the stem holder as in the conventional mechanism.

4. The stem setting mechanism occupies less volume than the conventional stem setting mechanism.

5. The stem setting mechanism can be positioned on the same side of the base plate as the watch bridges (not shown) and so it is unnecessary to reverse the base plate when assembling the watch; this is very convenient when it comes to assembling the watch automatically.

6. Positioning of the stem, guiding of the stem in the radial and axial directions, and removing and assembling of the stem setting mechanism can be easily performed.

A timepiece according to the present invention may be a watch, a calendar watch, a chronograph etc.

A timepiece is also described and claimed in our Application No. 33559/71 (Serial No. 1343542).

WHAT WE CLAIM IS:—

1. A timepiece comprising: a base

member; a stem having a plurality of grooves therein to enable the stem to be set in one of a plurality of longitudinal positions; and a resilient member fixed at one end to the base member and having another end which engages one of the grooves in the stem and biases the latter towards the base member to retain the stem in one of said positions.

2. A timepiece as claimed in claim 1 including an L-shaped part at said another end of the resilient member for guiding the stem for movement in a direction parallel to its axis.

3. A timepiece as claimed in claim 1 in which the resilient member has first means for guiding the stem for movement in a longitudinal direction.

4. A timepiece as claimed in any preceding claim including second means for preventing rotation of said resilient member about said one end.

5. A timepiece as claimed in claim 4 in which said second means comprises a member rigidly attached to the base member and having a recess therein for receiving said another end of the resilient member.

6. A timepiece substantially as herein described with reference to and as shown in Figures 3 to 5 of the accompanying drawings.

J. MILLER & CO.,
Agents for the Applicants,
Chartered Patent Agents,
262 High Holborn,
London, WC1V 7EF.

the recess 13, prevents the stem holder from rotating about the screw 15.

Compared with the conventional stem setting mechanism that of the present invention has the following advantages:

1. The clearance between the stem and the base plate is relatively small.

2. The play of the stem in the axial direction is small.

3. The stem setting mechanism has no separate spring part, the resiliency of the mechanism being from the stem holder itself; furthermore, there is no pin to be formed by pressing from the stem holder as in the conventional mechanism.

4. The stem setting mechanism occupies less volume than the conventional stem setting mechanism.

5. The stem setting mechanism can be positioned on the same side of the base plate as the watch bridges (not shown) and so it is unnecessary to reverse the base plate when assembling the watch; this is very convenient when it comes to assembling the watch automatically.

6. Positioning of the stem, guiding of the stem in the radial and axial directions, and removing and assembling of the stem setting mechanism can be easily performed.

A timepiece according to the present invention may be a watch, a calendar watch, a chronograph etc.

A timepiece is also described and claimed in our Application No. 33559/71 (Serial No. 1343542).

WHAT WE CLAIM IS:—

1. A timepiece comprising: a base

member; a stem having a plurality of grooves therein to enable the stem to be set in one of a plurality of longitudinal positions; and a resilient member fixed at one end to the base member and having another end which engages one of the grooves in the stem and biases the latter towards the base member to retain the stem in one of said positions.

2. A timepiece as claimed in claim 1 including an L-shaped part at said another end of the resilient member for guiding the stem for movement in a direction parallel to its axis.

3. A timepiece as claimed in claim 1 in which the resilient member has first means for guiding the stem for movement in a longitudinal direction.

4. A timepiece as claimed in any preceding claim including second means for preventing rotation of said resilient member about said one end.

5. A timepiece as claimed in claim 4 in which said second means comprises a member rigidly attached to the base member and having a recess therein for receiving said another end of the resilient member.

6. A timepiece substantially as herein described with reference to and as shown in Figures 3 to 5 of the accompanying drawings.

J. MILLER & CO.,
Agents for the Applicants,
Chartered Patent Agents,
262 High Holborn,
London, WC1V 7EF.

