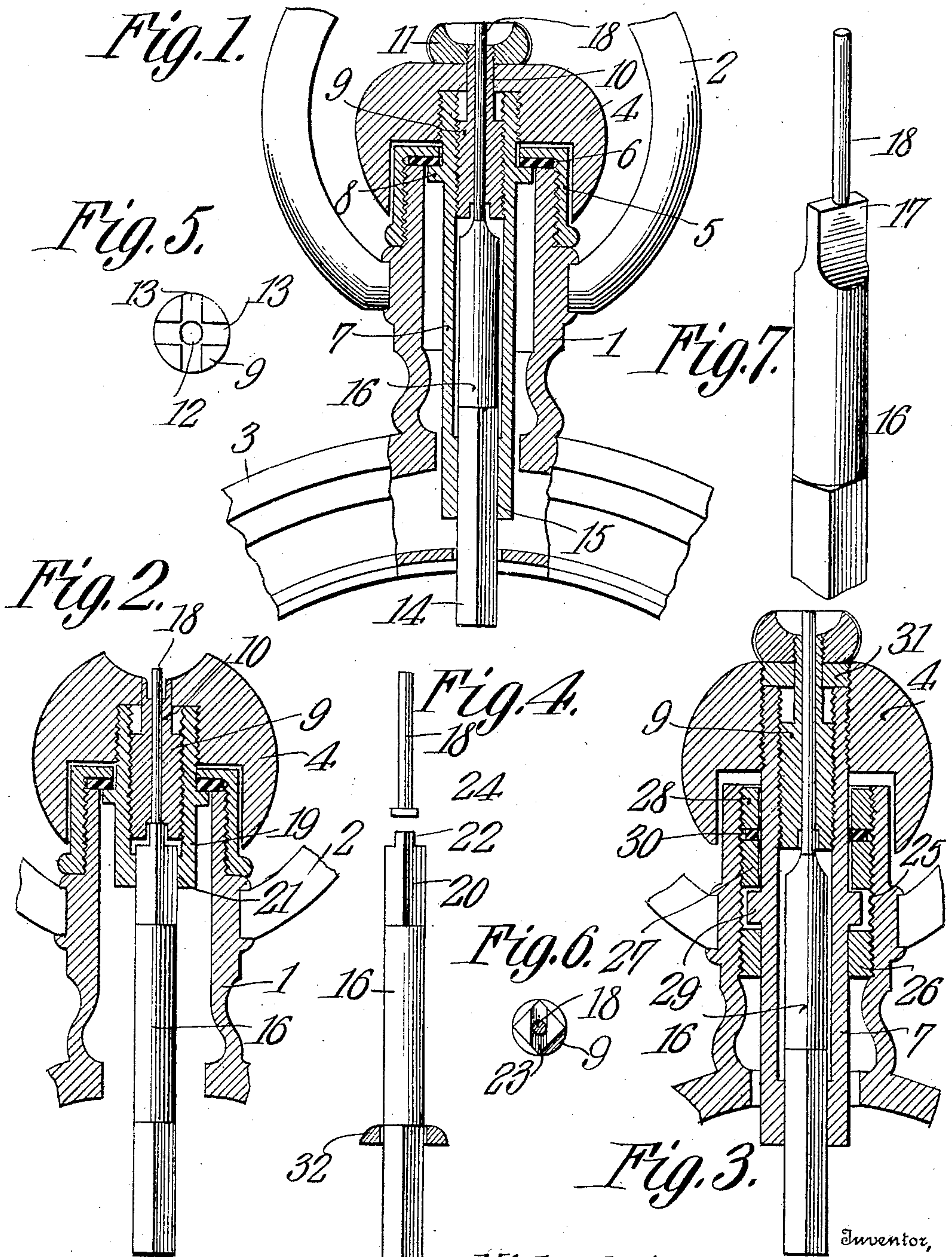


No. 879,208.

PATENTED FEB. 18, 1908.

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SETTING MECHANISM FOR WATCHES.
APPLICATION FILED OCT. 25, 1907.



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SETTING MECHANISM FOR WATCHES.

No. 879,208.

Specification of Letters Patent.

Patented Feb. 18, 1908.

Application filed October 25, 1907. Serial No. 399,160.

To all whom it may concern:

Be it known that I, MICHAEL SPORLEDER, a citizen of the United States, residing at Colorado City, in the county of El Paso and State of Colorado, have invented a new and useful Setting Mechanism for Watches, of which the following is a specification.

This invention relates to setting mechanisms for watches.

10 The object of the invention is in a simple and thoroughly practical manner to prevent accidental setting of the hands of a watch such as frequently ensues with a so called "pendant set", whereby to obviate the ob-
15 jections raised by railway officials to the use of watches so equipped.

It is, of course, recognized that the pendant set has decided advantages over the lever set for the reason that the former, in the case
20 of open-face watches, does not require the removal of the bezel to allow setting of the hands; but even with the best arranged pendant-sets, now on the market, there is always danger of the hands being acciden-
25 tally set by the stem being accidentally pulled or jarred out.

With the improvements hereinafter described, it will be seen that such a contingency cannot arise for the reason that when
30 the watch has been set and the winding square has been positioned in order to allow winding of the watch, setting cannot possibly ensue.

With the above and other objects as will
35 appear as the nature of the invention is better understood, the same consists in the novel construction and combination of parts of the hand-setting mechanism for watches, as will be hereinafter fully described and claimed.

40 In the accompanying drawings, forming a part of this specification, and in which like characters of reference indicate corresponding parts, Figure 1 is a view in vertical section through the pendant or stem portion of
45 a watch, showing one form of embodiment of the present invention. Figs. 2 and 3 are similar views of modified forms thereof. Fig. 4 is a view in elevation, partly in section of a modified form of winding square that may be employed in lieu of that shown
50 in Figs. 1 to 3. Fig. 5 is a bottom plan view of the set screw shown in Figs. 1 and 3. Fig. 6 is a similar view of the set screw, shown in Fig. 2. Fig. 7 is a perspective detail view of
55 the winding square shown in Fig. 1.

Referring to the drawings, 1 designates a

pendant, of the usual or any preferred construction, 2 a bow, 3 a portion of the rim of the casing with which the pendant is assembled, 4 a crown, and 5 a hood or shield that
60 is internally threaded to engage external threads on the upper portion of the pendant, and between which and the end of the pendant is disposed a packing 6 of any suitable
65 material that will exclude the entrance of moisture or dust.

Arranged within the pendant and extending about one-half the distance through the rim 3 is a sleeve 7, the upper end of which is externally threaded, and is engaged by in-
70 ternal threads in the crown 4, whereby the sleeve and crown are held assembled. At a point adjacent to the upper end of the sleeve is arranged an external flange 8 that is de-
75 signed to bear against the packing 6 that is clearly shown in Figs. 1 and 2. As usual, the crown is socketed to receive the hood 5, thus to impart a neat and finished appearance to the pendant.

The sleeve is internally threaded at its
80 upper end, for a portion of its length, and these threads are engaged by a set screw 9 which is provided with a reduced extension 10 that extends through the top of the crown and is externally threaded to receive a sub-
85 crown 11, the exterior of which is milled in the usual manner to facilitate its turning. The set screw 9 is provided with a longitudinal bore 12 and in its under face with cross
90 slots 13.

Disposed within the sleeve is a winding square, the lower end 14 of which is quad-
rangular in cross section and engages a similarly shaped portion 15 of the bore of the
95 sleeve. The intermediate portion 16 of the winding square is cylindrical and is reduced at its upper end to provide a rectangular point 17 that is designed to engage with the cross slots 13. From the point to the upper
100 terminal of the winding square, the latter is reduced in diameter to fit with the bore 12 of the set screw and to provide a push rod 18, which, as shown in Fig. 1 projects somewhat above the terminal of the reduced extension
105 10 of the set screw. The lower end of the winding square, as usual, engages with the winding and setting wheels, and is borne against by the set spring, and as these parts form no part of the present invention, de-
110 tailed illustration thereof is omitted.

In the form of the invention, shown in Fig. 2, the hood, pendant, and bow are the

same as those above described. The sleeve 19, which corresponds to the sleeve 7, in Fig. 1, is made much shorter to reduce the cost of manufacture, and the winding square has its upper end provided with a squared portion 20 that engages a similarly shaped portion 21 of the bore of the sleeve. A point or driver 22, that corresponds with the point 17 in Fig. 7 engages with a cross slot 23 formed in the under face of the set screw 9, and extends from corner to corner thereof. In this form of the invention the sub-crown is dispensed with, and the upper end of the set screw is provided with a slot which is adapted to receive the point of a screw driver to effect the setting of the hands. This latter form will be best adapted for use in the railway service as it will positively preclude any accidental setting of the hands.

As shown in Fig. 4, the winding square may be made in two parts, the portion 18 that extends through the set screw being provided with a head 24 which is adapted to be countersunk into the upper face of the set screw above the cross slots to any such distance as will prevent the point 22 from contacting with it.

In the construction shown in Fig. 3 the pendant is shown as provided internally with threads 25 to receive pendant nuts 26, 27 and 28. The nut 26 is first screwed to place, then the sleeve 7 is positioned, and in this form of the invention the sleeve is shown provided intermediate of its ends with a flange 29 that can bear upon the nut 26. The nut 27 is then positioned to bear against the flange 29, then the packing 30 is placed upon the nut 27 and finally the nut 28 is positioned. In addition to these features, the hollow sleeve terminates short of the upper end of the crown in order that a sub-nut 31 may be screwed into the crown and bear upon the sleeve. By this arrangement it will be possible to remove the winding square without first removing the crown, which would require the movement of a watch to be taken from a watch case. This can be avoided by employing sub-nut 31 which limits the end motion of the set screw 9 as effectively as though this member were made integral with the crown. Of course, the other forms described may also be provided with a sub-nut.

In setting the watch, it is necessary to steady the crown 4 with one hand and with the other loosen the sub-crown 11, after depressing the winding square, and unscrew the sub-crown to its limit, after which the crown may be turned to set the watch. The crown is again steadied, the winding square depressed and the sub-crown reseated until it bears against the crown. Should the point 17 or 22 fail to engage with one of the cross slots it will only be necessary to rotate the sub-crown to cause the parts to engage.

When the improvements are employed in connection with hunting case watches, there will be sufficient end shake permitted of the sleeve 7 to operate the case spring, and generally it will be preferred to use the short sleeve form of the invention, as shown in Fig. 2, with such cases. As usual, the winding square will be provided with a collar or sleeve 32 to engage with the case spring, as shown in Fig. 4.

It will be seen from the foregoing description that while the improvements herein described are simple in character, they will be thoroughly efficient for the purposes designed, and may be applied to an ordinary stem-winding watch without requiring any change in its structural arrangement.

Having described the invention what is claimed is:—

1. The combination with a pendant, of a sleeve arranged therein, a set screw carried by the upper end of the sleeve and provided on its inner end with a seat, a winding square having a reduced terminal to engage the seat, and means for moving the terminal into engagement with the seat.

2. The combination with a pendant of a sleeve mounted therein, a crown connected with the sleeve to rotate the same, a set screw carried by the sleeve and provided in its inner end with a seat, a winding square having a reduced terminal to engage the seat, and an extension constituting a push rod, carried by the winding square and projecting beyond the crown.

3. The combination with a pendant, of a sleeve to rotate the same, a set screw carried by the sleeve and having a threaded extension projecting beyond the crown and provided in its inner end with a seat, a winding square having a reduced portion to engage the seat, and an extension constituting a push rod projecting through the set screw and beyond the outer end of the same, and a sub-crown threaded on the threaded end of the set screw.

4. The combination with a pendant, of a sleeve mounted therein, a crown threaded on the sleeve, a crown carried by the pendant and coacting with the flange on the sleeve to limit the outward movement of the latter relatively to the pendant, a set screw threaded into the upper end of the sleeve and provided in its inner end with a seat, and a winding square having a reduced portion to engage the seat and an extension, constituting a push rod projecting through the set screw and beyond its upper end.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

MICHAEL SPORLEDER.

Witnesses:

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