

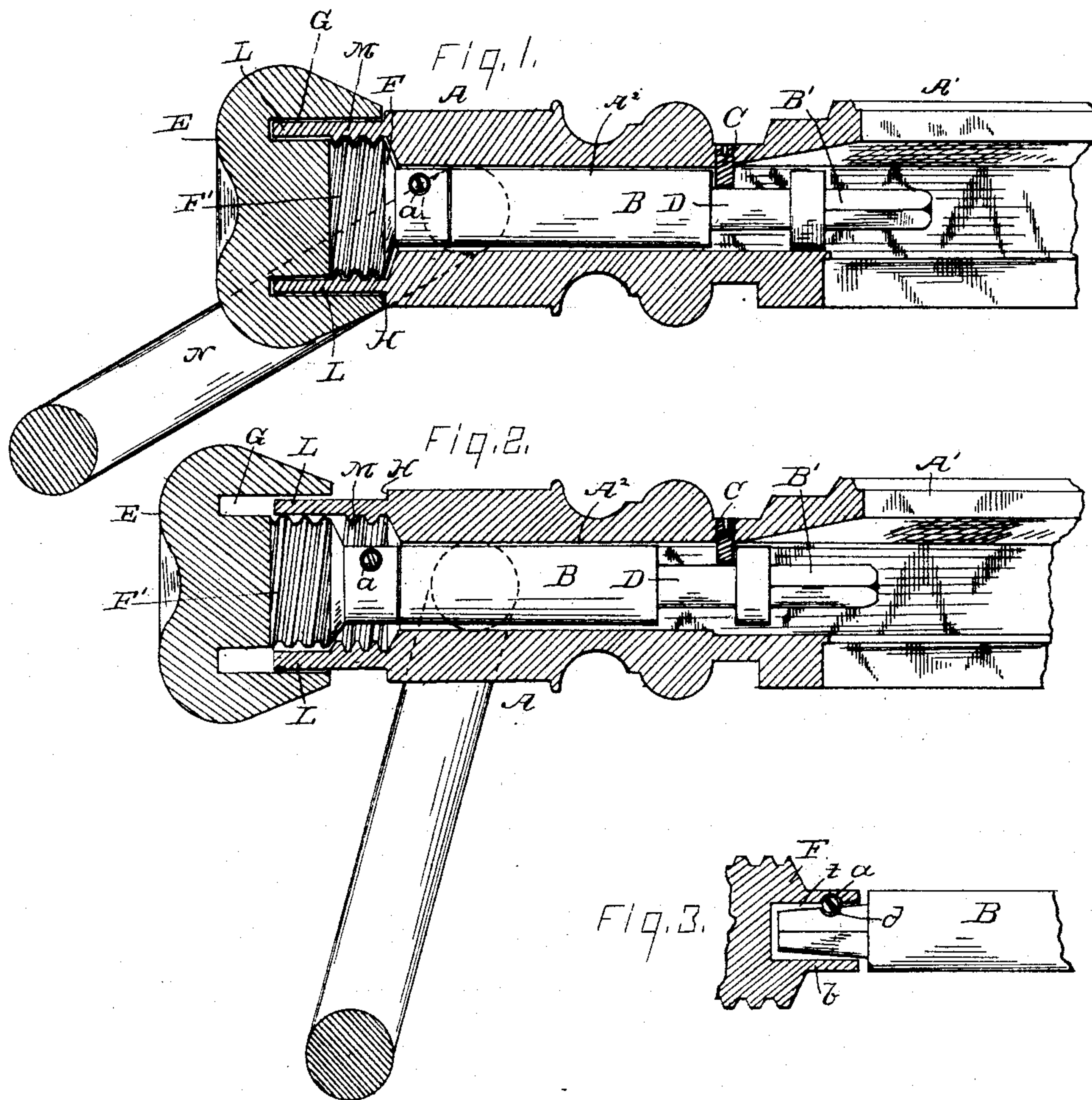
(Model.)

C. KISTLER.

WATCH CASE PENDANT.

No. 338,753.

Patented Mar. 30, 1886.



WITNESSES:

Charles H. Roberts.

Cyrus K. K.

INVENTORI

Casper Kistler
by Marahan & Ward
attys

UNITED STATES PATENT OFFICE.

CASPER KISTLER, OF STERLING, ILLINOIS.

WATCH-CASE PENDANT.

SPECIFICATION forming part of Letters Patent No. 338,753, dated March 30, 1886.

Application filed July 21, 1885. Serial No. 172,250. (Model.)

To all whom it may concern:

Be it known that I, CASPER KISTLER, a citizen of the United States, residing at Sterling, in the county of Whiteside and State of Illinois, have invented certain new and useful Improvements in Watches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention has reference to stem-winding watches, and pertains, specially and wholly, to certain novel devices for closing the end of the pendant to exclude dust, and at the same time furnish a permanent and effectual seat for the outer end of the winding-stem.

In stem-winding watches the crown serves as the head of the winding-stem. In all watches it is of the highest importance to close every possible avenue for the entrance of dust. The latter is sometimes of such a fine impalpable character that a crevice which would seem too small to be objectionable will admit sufficient of such dust to affect injuriously, and sometimes permanently, the delicate mechanism of the instrument. So true is this that it is impracticable to use parts on the exterior of the watch which work on or against each other, as any part of the inclosure of the works, or the cover or cap of any avenue leading into the works.

A stem-winding watch is a great convenience, for obvious reasons; but heretofore it has been difficult, if not impracticable, to close their inner cavity sufficiently to exclude fine particles of dust, particularly after the parts are somewhat worn.

In one class of stem-winders as heretofore made the crown has simply rotated on an inner cylinder, and the fitting of the outer shell or crown on such inner cylinder as its pivot has been relied upon to exclude dust; but it is almost impracticable to fit such contiguous surfaces tightly enough to prevent the ingress of dust, and at the same time be loose enough to permit the crown to rotate, and if such fit were tight when the instrument was

new it soon became loose from the wear of the contiguous parts, and the tighter was the fit in the first instance the greater was the attrition. The dust would work under the crown, and thence would have a free passage along the bed of the winding-stem into the works of the watch. In another class of stem-winders it has been attempted to avoid this difficulty by screwing the inner edge of the crown against the wall of an annular flange formed contiguously on the exterior of the pendant. This has been accomplished by forming a reverse exterior thread on the pendant and a corresponding thread on the inner walls of the crown. These threads had their action only when the crown was revolved reversely, and therefore the rotation of the crown in the operation of winding withdrew or unscrewed the crown from the fixed thread and from the seat of such crown, when the crown, having no or but a slight pivot to rotate upon, had a wabbling or oscillating movement, to avoid which watch-owners in winding would turn the crown forward but part of a revolution, then turn it backward the same distance, so as to prevent the crown from coming entirely off from the inner thread. Of course, such reverse rotation of the winding-stem had to be provided for by a ratchet, mechanism within the works of the watch, the repeated use of which rapidly wore out the parts involved. This construction also gives the pendant a clumsy appearance.

The object of my invention is to furnish means for screwing on the crown after the winding is completed sufficiently tight to exclude all dust, and at the same time to provide a smooth, permanent, and sufficient pivot for the crown to rotate upon after it has been withdrawn from the thread, so that the winding of the watch may be continuous until completed.

In the drawings, Figure 1 is a sectional view of a pendant embodying my invention, exhibiting the crown screwed onto its seat. Fig. 2 is a like view with the crown withdrawn from its threaded seat, exhibiting its position during the process of winding. Fig. 3 is a detailed exhibit of the mode of seating the outer end of the winding-stem B.

As my invention extends only to improve-

ments contained in the pendant of the watch, I do not deem it necessary to show or describe any other portion of the latter.

A is the pendant of the watch, integral with the watch-case A'.

B is the winding-stem, seated longitudinally loosely in a corresponding and circular cavity.

A² is the center of the pendant A, and extending entirely through the latter.

The inner end, B', of the winding-stem B is formed with flat sides, and adapted to fit into and actuate the usual socket provided in the interior of the watch for the insertion of such winding-stem.

C is a screw seated transversely in the wall of the pendant A, and adapted to project into an annular recess, D, formed in the winding-stem B, and of sufficient width to permit such stem to have the necessary longitudinal movement to allow its withdrawal from the threaded seat hereinafter mentioned, and at the same time prevent such stem from withdrawing entirely from the socket aforesaid. The head of the screw C is countersunk sufficiently to permit the watch-case to close down smoothly thereon, and can be placed at any convenient point.

E is the crown, on the inner end of which is formed the central boss, F, provided on its exterior with the thread F'. In the interior of the crown E and around the boss F is formed the annular recess G. The adjacent end of the pendant A has an annular exterior reduction, L, sufficient to permit the outer end of such pendant to pass into the recess G of the crown E. On the inner wall of the pendant A are formed a few threads, M, corresponding to the threads F' on the boss F, and so located as to engage the latter threads and draw the inner edge of the crown E tightly against the inner wall, H, of the reduction L by reversing the rotation of the crown E after the process of winding is completed. The reduction L is of sufficient length and extends far enough beyond the threaded portion M and into the recess G to form a pivot for the rotation of the crown E in the process of winding the watch, this after the boss F has been unscrewed from the threads M.

The outer end of the winding-stem B is of a square tapering formation, and is inserted loosely into a square socket, t, in the boss F, and is held therein by means of a transverse screw, a, seated in a central projection, b, of the boss F, and projected loosely into a slot, d, formed transversely through one angle of the inserted square end of the stem B. This loose connection of the outer end of the winding-stem B to the boss F affords sufficient lateral oscillation of the stem B in every direction to adjust the inner end of the latter to any possible variation in the locality or action of the socket into which the inner end of the stem is inserted.

N is the usual bow, attached in any suitable mode to the pendant A.

As a substitute for the threads F and M, the usual zigzag slot and pin may be employed.

The operation of my invention is as follows: Assuming the normal position of the parts to be as shown in Fig. 1, the crown E of the winding-stem B is grasped by the operator, and the latter rotated in the direction to wind the watch. The threads F and M having their engagement in the contrary rotation, the winding of the watch disengages such thread, and moves the winding-stem B outward until such threads clear each other. The screw C having now come in contact with the inner end of the recess D, the winding-stem is prevented from further withdrawing. As the process of winding is continued, the crown E is supported firmly by means of the outer end of the depression L traversing the recess or groove G. When the winding is completed, the crown E is screwed upon the pendant A by a reverse movement, the outer wall of the recess D passing into the screw C. As the inner edge of the crown E fits tightly against the inner wall, H, of the depression L, the dust is wholly excluded, and as such contiguous parts do not slide on each other there is never any wear of either of such contiguous faces, and the original condition is not affected by subsequent use.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. The combination of the pendant A, provided with the interior thread, M, and external annular shoulder, H, the winding-stem B, provided with the annular recess D, the screw C, and the crown E, provided with the annular recess G, and internal boss, F, having the exterior thread, F', the boss F being thus adapted to be screwed into the open outer end of the pendant A, and the outer end of the latter to enter coincidently the recess G until the inner edges of the crown E shall abut against the shoulder H, substantially as shown, and for the purpose described.

2. The combination of the pendant A, provided with the interior thread, M, and external annular shoulder, H, the winding-stem B, having a limited longitudinal play in the pendant A, the crown E, provided with the annular recess G, and internal boss, F, having the exterior thread, F', the boss F being thus adapted to be screwed into the open outer end of the pendant A, and the outer end of the latter to coincidently enter the recess G until the inner edges of the crown E shall abut against the shoulder H, substantially as shown, and for the purpose herein specified.

In testimony whereof I affix my signature in presence of two witnesses.

CASPER KISTLER.

Witnesses:

V. S. FERGUSON,
J. A. MORGAN.