No. 712,287. Patented Oct. 28, 1902.

W. H. FITZ GERALD.

WATCHCASE.

(Application filed Feb. 19, 1902.)

(No Model.) 2 Sheets—Sheet 1.

Fig: 1.

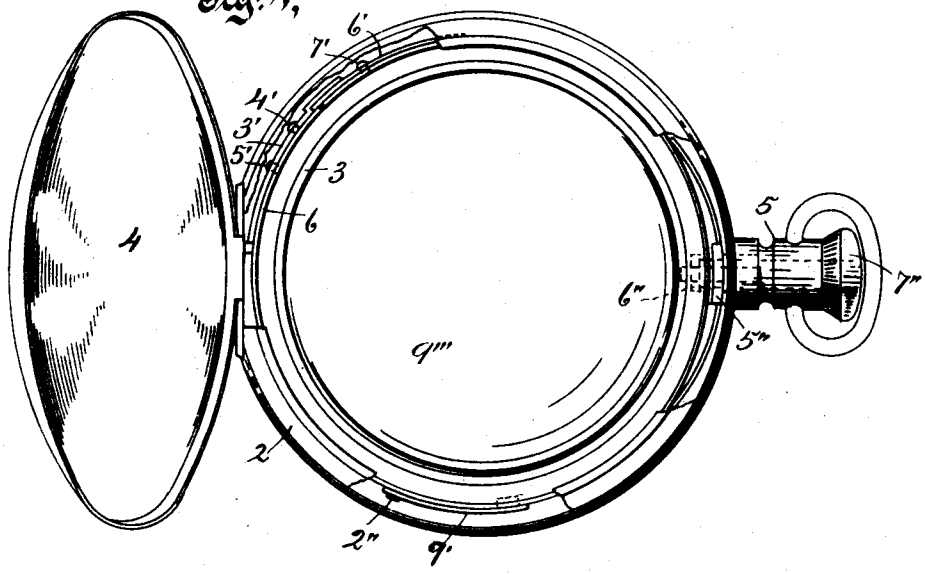
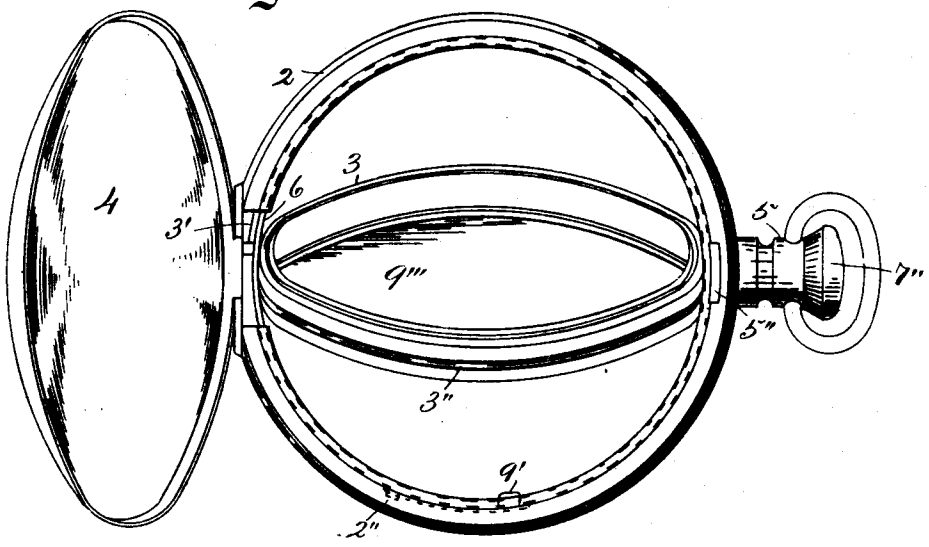


Fig: 2.



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Fig: 3,

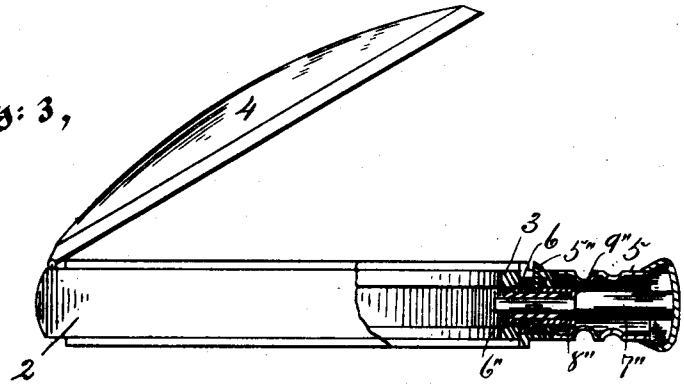


Fig: 4,

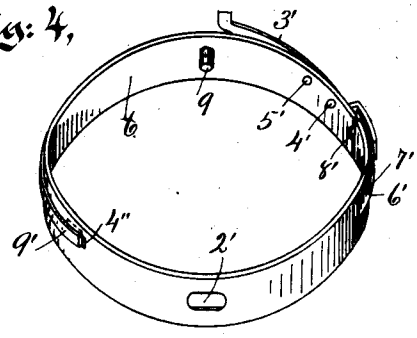


Fig: 5,

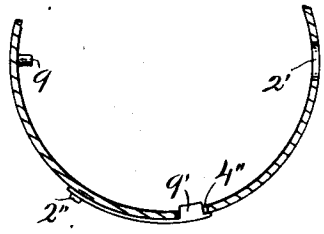
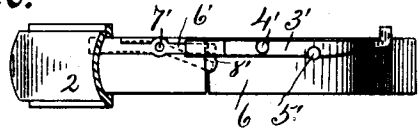


Fig: 6.



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UNITED STATES PATENT OFFICE.

WALTER H. FITZ GERALD, OF BROOKLYN, NEW YORK, ASSIGNOR OF ONE-HALF TO RUBE R. FOGEL, OF NEW YORK, N. Y.

WATCHCASE.

SPECIFICATION forming part of Letters Patent No. 712,287, dated October 28, 1902.

Application filed February 19, 1902. Serial No. 94,785. (No model.)

To all whom it may concern:

Be it known that I, WALTER H. FITZ GERALD, a citizen of the United States, and a resident of New York, Brooklyn borough, in the county of Kings and State of New York, have invented certain new and useful Improvements in Watchcases, which improvements are fully set forth in the following specification.

In a general sense this invention relates to improvements in mechanical structures of that class employed for inclosing the movements of watches and commonly known as "watchcases;" and it relates more particularly to that type of cases commercially known as "magic" watchcases, the same being so designated from the fact that each is constructed in a manner to be readily convertible from the so-called "hunting-case" to the so-called "open-face" case, or vice versa.

The object of this invention is to provide a watchcase of the character above indicated which shall be simple, inexpensive, and novel as regards construction, which shall embody elements adapted to facilitate that operation commonly known as "springing" a watchcase, which shall be compact, positive, and reliable in practical service, and which shall possess certain well-defined advantages over prior analogous structures.

The invention consists in the employment of certain parts novel as to form, in the novel disposition and arrangement of the various parts thereof, in certain combinations of the latter, and in certain details of construction, all of which will be specifically referred to hereinafter and set forth in the appended claims.

The invention is clearly illustrated in the accompanying drawings, wherein similar reference-numerals denote like parts throughout the several views, and as to said drawings—

Figure 1 is a face view of a watchcase embodying my said improvements, the hinged cover thereof being shown in its open position. Fig. 2 is a view of said watchcase similar to Fig. 1, the movement-ring thereof being shown as having undergone a portion of its reversing action to better disclose certain minor features of the general construction. Fig. 3 is an edge view of the watchcase, partly in section, a portion of the case-center and interior parts being broken away. Fig. 4 is a view in perspective, illustrating the compensatory ring which I employ and the relative arrangement with respect thereto of certain minor elements of the general construction. Fig. 5 is a fragmentary sectional view of the compensatory ring which I make use of, the movement-ring catch carried thereby being also shown in connection therewith. Fig. 6 is a detail view, partly in section, illustrating the form and arrangement of certain parts employed for clamping the ends of the compensatory ring when the latter is in position for service.

Essentially my invention resides in the utilization, in connection with a watchcase, of a compensatory ring situated ordinarily intermediate of the case-center and movement-ring and adjustable in such manner as to insure the registry with a diametric line of the case-center of opposing points along such compensatory ring and at variance with a diametric line thereof.

My invention further resides in the utilization, in connection with a watchcase, of a compensatory ring capable of serving as a carrier for the movement-ring catch and the fly-spring, or either of them, of the watchcase.

Having reference to the accompanying drawings, the watch case there illustrated comprises, primarily, a case-center 2, movement-ring 3, hinged cover 4, and pendant 5. The case-center 2 has a continuous or substantially continuous channel at its inner side.

6 represents the compensatory ring which I employ, this being arranged at the channel aforenamed of the case-center and ordinarily in a manner to leave a substantial portion of said channel unoccupied at all points between the compensatory ring and said case-center, the object of this being to provide due space for the mounting of the movement-ring catch 9′ and fly-spring 3′, or either of them, as desired, on the compensatory ring at the convex side thereof.

When availed of in connection with a watchcase embodying a reversible movement-ring, as 3, the compensatory ring 6 is provided with a fixed trunnion 9, projecting therefrom

inwardly or toward the axis thereof. The compensatory ring when in position for service operates through the medium of the trunnion 9 to rotatively support the movement-ring 3 at the adjacent segment thereof, and the means employed for rotatively supporting said movement-ring at the diametrically opposite segment thereof will be hereinafter described.

It is essential that the ring 6 be capable of adjustment concentrically with respect to the case-center 2 under all conditions, and as a means to this end I have shown said compensatory ring as provided with an elongated opening 2′, the elongation of said opening conforming to the circumferential lines of said compensatory ring.

Where the trunnion 9 is availed of, the opening 2′ is formed in that segment of the compensatory ring which occupies a position diametrically opposite the trunnion 9.

The compensatory ring 6 is constructed from a strip of suitable material, preferably resilient, as tempered steel, and shaped so that its ends are adapted to form a joint, as clearly illustrated in the drawings.

3′ represents the fly-spring of my improved watchcase. To the end that this may be conveniently mounted upon or removed from the compensatory ring 6 the same is variably notched along its opposite edges, the said notches being adapted to receive, respectively, the headed studs 4′ 5′, projecting outwardly from the convex side of the compensatory ring, and receive said studs in such manner that when due pressure is brought to bear upon the free end of said spring, as in the operation of closing the cover 4, the binding engagement of said spring with said studs will be intensified, and any undue displacement of said fly-spring will be obviated. To displace the fly-spring, as in repairing operations, it is only necessary to grasp either end thereof and move it away from the adjacent stud 4′ or 5′.

It is essential that means be employed for retaining the ends of the ring 6 in registry when said ring is in place within the case-center, and in this connection I have illustrated a resilient lever 6′, the same being mounted on the ring 6 at the convex side thereof and adjacent to one of its end portions, as through the medium of the stud 7′.

Under normal conditions the free end of the lever 6′ laps beyond the adjacent end portion of the ring 6, while its opposite end engages the case-center at one side of the channel thereof and in a manner to resist any pressure applied to the free end of said lever which would serve to move such lever, as on the stud 7′; but as said lever is resilient its free end portion may by means of a pointed or other suitable tool be urged out of its normal position, as to the position indicated in dotted lines in Fig. 6. The adjacent end aforenamed of the ring 6 is suitably cut away, as at 8′, so that the free end portion of said lever may escape from engagement therewith when moved as herein stated and to permit the use of the tool above referred to from the inner side of the ring 6.

As the lever 6′ alone is inadequate to the purpose specified, I have further in this connection shown the fly-spring 3′ as kinked at its butt-end in a manner to overlap the adjacent free end of the lever 6′ when the latter occupies its normal position and as clearly illustrated in the drawings. The kinked portion of the fly-spring thus serves as a keeper for the free end of said lever.

Where the mechanism just described is employed, removal of the ring 6 from the case-center is effected by deflecting the free end of the lever 6′ out of its normal position and as to the position indicated in dotted lines in Fig. 6, whereupon either end portion of the ring 6 may be drawn inwardly or toward the axis of said ring, and the latter as a whole, together with the parts mounted thereon, may then be easily displaced from the case-center.

The ring 6 being resilient the diameter thereof may be temporarily diminished, as by applying finger-pressure thereto at opposite segments thereof, whereupon said ring may be readily replaced within the case-center.

It will be understood that means other than such as described may be availed of for retaining the respective end portions of the ring 6 in registry within the case-center.

Where a reversible movement-ring is employed in connection with the compensatory ring 6, it is further essential that means be provided for locking said movement-ring at that point in its reversing action where it registers with the plane of the case-center, and it is preferable that the mechanism availed of for this locking purpose be automatic in character. I have accordingly shown a resilient catch 9′, mounted on the ring 6 at the convex side thereof, and as through the medium of the rivet 2″.

The free end of the catch 9′ is shaped so as to project slightly inward beyond the ring 6 under normal conditions; but the same may be urged outwardly from said ring against the resiliency of said catch. Therefore when the movement-ring 3 occupies the position shown in Fig. 1 the free end of the catch 9′ will have a locking engagement therewith at the convex side thereof, and to facilitate this locking engagement the said ring 3 may be roughened or provided with a recess, as 3″, at the convex side thereof, and the compensatory ring 6 is suitably cut away or provided with an opening, as 4″.

The lock-spring 5″, of common construction save that it is provided with an opening sufficient in size to permit the removable trunnion 6″ to project through and beyond said spring, is located at the channel of the case-center between the latter and the compensatory ring 6 and bears at its respective

ends against said ring at the convex side thereof.

The trunnion 6″ is here shown as tubular in form and as having a threaded engagement with the movement-ring 3. It approximates the character of a sleeve with respect to the winding-stem 7″ and bears rotatively at its outer end in the spring-actuating member 8″, tubular in form and let onto the stem 7″ at its shoulder 9″, the same being movable with said stem inwardly and bearing for compression purposes against the lock-spring 5″, and the said trunnion 6″ thus serving to rotatively support one side of the movement-ring 3, the opposite side thereof being rotatively supported by the fixed trunnion 9.

The parts located at the pendant 5 and just referred to form the subject of an application for patent now pending in my name, the same having been filed on the 3d day of October, 1901, and serially numbered 77,958.

The movement-ring 3 is provided with a cap 9‴, and this serves as a back cover for the case as a whole when it is desired to reverse the movement-ring so as to form a "hunting" case, the hinged cover 4 then performing the functions of a front cover.

Referring again to the removable trunnion 6″, this in practice, as will be readily understood, projects through the compensatory ring 6 by way of the elongated opening 2′, formed therein.

The manner in which the respective parts operate has been hereinbefore clearly set forth, and it only remains to state that the reversing of the movement-ring 3 is effected as by finger-pressure applied to a segment thereof away from the axis of movement of said ring.

It will be seen that my improved watchcase is particularly well adapted for the purposes for which it is intended, and as the same may be modified to some extent without material departure from the spirit and principle of my invention I do not wish to be understood as limiting myself to the precise details of construction set forth in the appended claims.

Having fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A watchcase comprising a case-center, a compensatory ring and a pivoted watch-movement, the ring supported by the case-center and adapted to be shifted to bring the pivots into the diametric center of the case, substantially as specified.

2. A watchcase comprising a case-center and a compensatory ring, the latter supported by the former, adapted to shift concentrically with respect thereto, and provided with a trunnion fixed to the ring, substantially as herein specified.

3. The combination of a compensatory ring, a watchcase for supporting the same, said ring consisting of a piece of suitable material bent or otherwise shaped into the form of a ring and so that its ends are adapted to register and form a joint, and means for retaining the ends of said ring in registry, substantially as herein specified.

4. A resilient compensatory ring for a watchcase, consisting of a piece of suitable material bent or otherwise shaped into the form of a ring and so that its ends are enabled to register and form a joint, the said ring as a whole being provided with an elongated opening at a segment therealong and with a trunnion at a segment therealong opposite the said opening, and means for retaining the ends of said ring in registry.

5. In a watchcase, in combination, a case-center having a cover hinged thereto, a compensatory ring supported by said case-center and having an elongated opening at a segment therealong, and a fly-spring detachably mounted on said compensatory ring, one end of said fly-spring having a shoulder and a catch coöperating with the shoulder to lock the ring within the case-center, substantially as herein specified.

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