No. 712,285. Patented Oct. 28. 1902.

W. H. FITZ GERALD.

WATCHCASE.

(Application filed Oct. 8, 1901.)

(No Model.) 2 Sheets—Sheet 1.

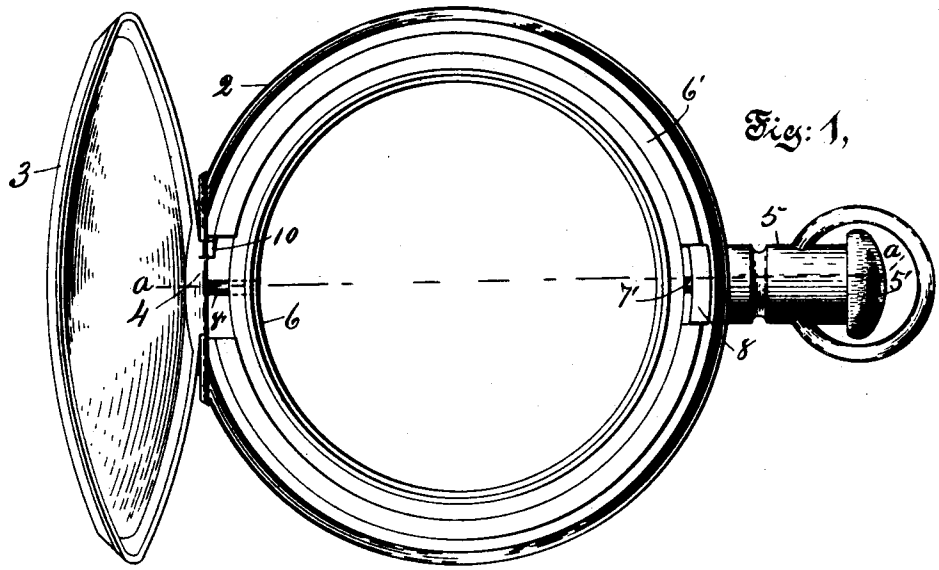


Fig: 1,

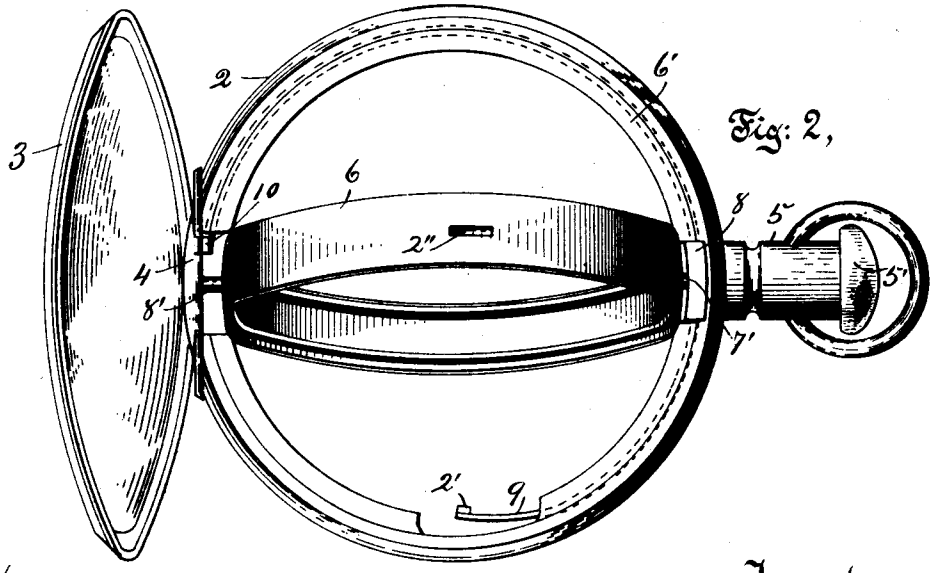


Fig: 2,

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(No Model.) 2 Sheets—Sheet 2.

Fig: 3,



Fig: 4,

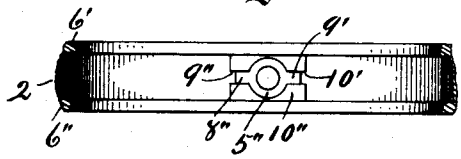


Fig: 5,

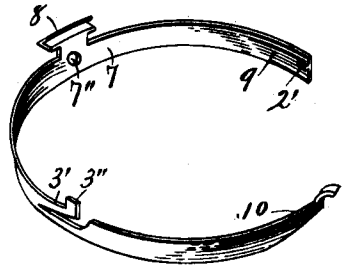




Fig: 6.

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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. 712,285, dated October 28, 1902.

Application filed October 8, 1901. Serial No. 77,958. (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 and accompanying drawings.

Figure 1 is a face view of a watchcase embodying my said improvements, the front cap 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 substantial portion of its reversing movement and a fragment of the near inturned flange of the case-center being broken away to better disclose the movement-ring terminal of the combination-spring which I make use of. Fig. 3 is a central section taken longitudinally through the pendant of the case, as on the line *a a* of Fig. 1, a portion of the movement-ring being broken away to disclose the retaining-prong of the combination-spring of my improved watchcase. Fig. 4 is a fragmentary view of the case-center of the case looking at the inner end of the pendant employed in connection therewith. Fig. 5 is a view in perspective illustrating the combination-spring of my improved watchcase. Fig. 6 is a view in perspective of the spring-actuating member which I employ between the winding-stem and combination-spring of my said improved watchcase.

Similar reference-numerals denote like parts throughout the several views of the drawings.

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 for the purpose named as are commercially known as "magic" watchcases, the same being so named from the fact that each is of such construction as to be readily convertible from the so-called "hunting" type of case to the so-called "open-face" case, or vice versa.

The object of this invention is to provide a watchcase which shall embody an integrant elastic member so formed and disposed as to coöperate with the respective movable parts of said case, novel features of construction whereby the practicability of the employment of a depressible elastic member between the reversible movement-ring and the winding-stem of such case is materially enhanced, which shall be so constructed as to insure ready access, when desired, to said elastic element and other coöperating parts, as in repairing operations, which shall minimize the cost of that operation commonly known as "springing" a watchcase, which shall be durable, positive, and reliable in practicable 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.

Having reference to the accompanying drawings, 2 denotes the case-center; 3, the front cap hinged to the case-center, as at 4; 5, the pendant, and 6 the reversible movement-ring of the watch-case. The case-center is provided with inturned opposing flanges 6′ 6″, forming an interior recess, within which is located the combination-spring 7, which latter approximately midway the length thereof is provided with an outwardly-projecting or lateral hook-like head 8, the flange 6′ being cut away at the point of junction of the pendant 5 with the case-center 2 to provide clearance for the head 8. The spring 7 is extended in one direction beyond its head 8 to form a locking-terminal 9 and is extended in the opposite direction beyond its head to form a lifting-terminal 10, the latter normally engaging and tending to yieldingly urge the closure member 3 to its open position, as in common practice. Under normal conditions the terminal 9 of the spring 7 curves inwardly from the case-center 2, so as to duly engage the movement-ring 6 for locking purposes, and I prefer that the same be

provided with a teat, as 2′, adapted to take into a recess, as 2″, formed in the peripheral face of the movement-ring 6, and thereby yieldingly lock the latter against movement in either direction, except under pressure properly applied thereto at its circumference. As the movement-ring 6 approaches the position shown in Fig. 1 of the drawings it engages the teat 2′ and causes the terminal 9 to recede from its normal position in the direction of the case-center 2 against its own elasticity, the said terminal there remaining until said ring reaches the position shown in Fig. 1, whereupon the recess 2″ is brought into registry with the teat 2′, thus permitting a slight return movement of the terminal 9 in the direction of the movement-ring 6, which return movement on the part of the terminal 9 results in the seating of the teat 2′ in the recess 2″, thereby yieldingly locking the movement-ring 6 against movement in either direction, as above stated.

The combination-spring 7 is provided with one or more lateral retaining-prongs 3′, adapted to have a locking engagement with one of the opposing flanges, as 6′, of the case-center 2 for the purpose of preventing undue displacement of said spring from said case-center as when the movement-ring 6 shall have been removed therefrom. The prong 3′ is formed by obliquely slitting the spring 7, as clearly illustrated in the drawings, and its free end normally projects beyond the edge of said spring, so that the same may have a frictional contact with the adjacent case-center flange, as 6′, or the free end of said spring may be provided with a spur, as 3″, adapted to enter a recess, as 2‴, formed in said case-center flange and registering with said spur. When it is desired to remove the spring 7 from the case-center, as in the operation of effecting repairs, the spur 3″ is dislodged from the recess 2‴, or the free end of said prong in the absence of the spur 3″ is thrown out of frictional contact with its coöperating case-center flange by inserting between said flange and the prong 3′ a suitable tool and properly manipulating the latter to depress said prong against its own elasticity.

The spring 7, through the medium of the head 8, serves to exert a locking force on the cap 3 when the latter occupies its closed position, as in common practice, and when the movement-ring 6 occupies the position shown in Fig. 1 and the cap 3 is thus locked in its closed position it will be observed that the spring 7, in conjunction with its terminals 9 and 10, performs simultaneously the following three functions: that of locking the cap 3 in its closed position, that of yieldingly locking the movement-ring 6 in its normal position of registry with the case-center 2, and that of tending to thrust the cap 3 to its own position. It will further be observed on reference to Fig. 3 of the drawings that the spring 7 is located between the movement-ring 6 and the case-center 2, with clearance for depression of said spring from the position it occupies in Fig. 3 of the drawings inwardly toward the movement-ring for annulling the locking engagement of the head 8 with the cap 3, as in common practice, and an essential feature of my invention comprises the utilization of parts so formed and relatively disposed as to insure marked advantages in connection with the application of actuating-pressure to the spring 7 and the mounting of the reversible movement-ring 6 within the case-center 2. In this connection I employ a winding-stem 4′, having a stop, as 4″, here shown as an integrant portion of the stem 4′ and of greater diameter than the remaining portion of said stem, particularly the free end portion thereof, the opposite or outer end of said stem being secured to the cap 5′, which takes over and incloses the outer end of the pendant 5, all as in common practice.

5″ is a spring-actuating member, here shown as in the form of a sleeve and as interposed between the stop 4″ and the spring 7, with the free end portion of the stem 4′ extending loosely and longitudinally through it, said spring-actuating member, longitudinally through the hollow trunnion or arbor 7′, and terminating at a point beyond said trunnion for winding purposes, as will be readily understood. The trunnion 7′ projects from the movement-ring 6 outwardly through and beyond the spring 7 by way of a suitable opening, as 7″, formed in said spring, and enters and rotatively bears within the spring-actuating member 5″. This construction permits depression of the spring 7 through the medium of the stem 4′ and member 5″ without affecting the movement-ring 6 or the part or parts employed in the mounting of the latter. The ring 6 has a center of movement diametrically opposite the trunnion 7′, as on the pivot 8′, projecting inwardly from the case-center 2. While in the accompanying drawings I have shown the pivot 8′ as fixed and the trunnion 7′ as removably carried by the ring 6, reversal of these details of construction is permissible, it being only necessary that either the trunnion 7′ or the pivot 8′ be removable to permit the adjustment of the movement-ring within, or the removal of such ring from, the case-center 2.

The trunnion 7′ may be seated, as under force, in a suitable opening formed in the side wall of the movement-ring 6, may have a threaded engagement with said ring at the opening therein, or may be otherwise removably disposed with respect thereto.

The spring-actuating member 5″ may be of any suitable exterior or cross-sectional contour, though I have shown the same as tubular in cross-section and provided at its inner end with opposing lateral lugs 8″ 9′, to respectively receive which, when the member 5″ is in position for service, suitable alining recesses 9″ 10′ may be provided, as by transversely slitting a raised portion 10″, with

which the case-center 2 may be provided at the inner side thereof and as indicated in Fig. 4 of the drawings.

It will be observed that my improved watch-case is particularly well adapted for the purposes for which it is intended and that the same may be modified to some extent without material departure from the spirit and principle of my invention.

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

1. In a reversible watch, a case-center; a cap hinged thereto; a movement-ring pivoted in the case-center; and a spring in the case-center, the said spring having a projection at one end for operating the cap, a projection at the other end for locking the movement-ring in the case-center, and a case-catch intermediate the ends thereof.

2. In a watch, a spring carrying a case-catch and having a hole therein; a stem for operating the spring, having a rigid projection thereon; and extending through said spring by way of the hole therein; a loose collar around the stem; a movement-ring also having a hole therein; and a device for holding the stem in the movement-ring, the said collar working against the rigid projection of the stem, at one end, and against said spring at the opposite end thereof, substantially as herein specified.

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DINAH STANDER.