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J. R. PUTNAM

2,060,118

WATCH

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Fig. 1.

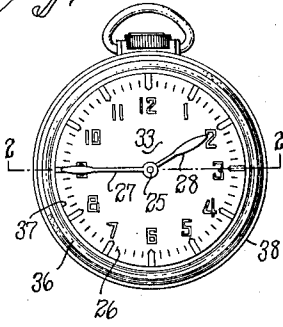


Fig. 2.

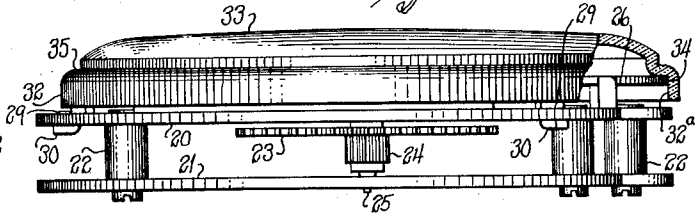


Fig. 3.

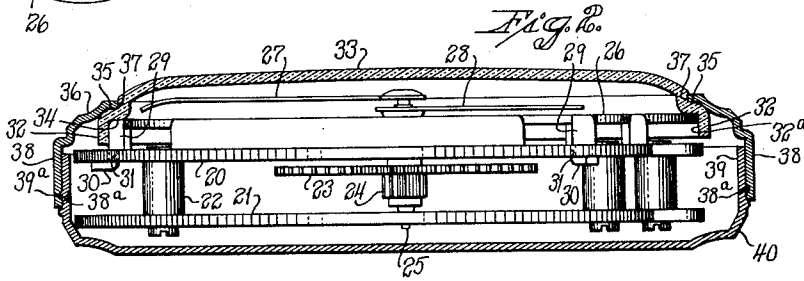


Fig. 4.

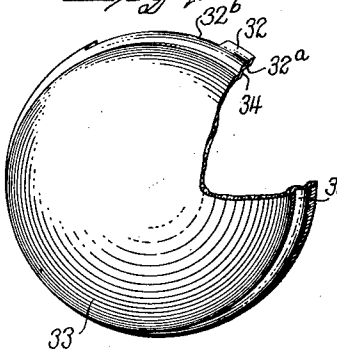


Fig. 5.

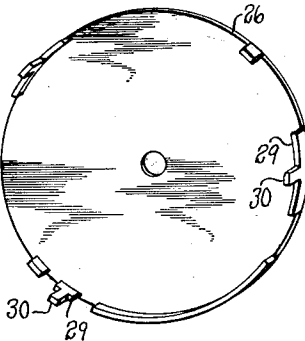


Fig. 6.

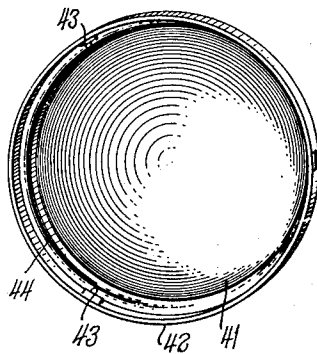
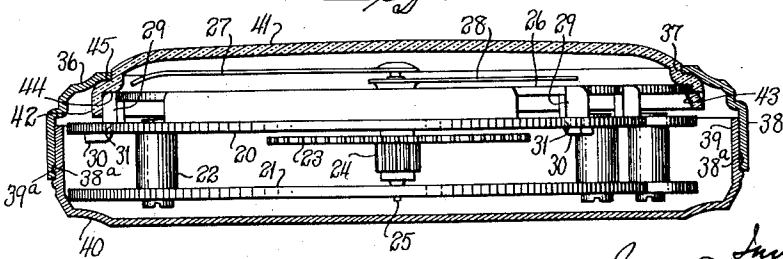


Fig. 6.



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# UNITED STATES PATENT OFFICE

2,060,118

WATCH

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Application September 21, 1935, Serial No. 41,563

2 Claims. (Cl. 58—91)

This invention relates to an improvement in watches, and has for one of its objects the provision of a superior time-instrument assembly of the class referred to, which is characterized by superior convenience of assembly and disassembly.

Another object is to provide a watch structure in which the crystal is organized with the movement-unit in a superior manner so as to protect the face, hands, etc., when such movement is out of its case.

With the above and other objects in view, as will appear to those skilled in the art from the following, considered in conjunction with the accompanying drawing and appended claims, the present invention includes all features disclosed therein which are novel over the prior art.

In the accompanying drawing:

Fig. 1 is a face view of a pocket watch embodying the present invention;

Fig. 2 is a view mainly in transverse section on the line 2—2 of Fig. 1 but showing the movement-plates and dial-plate in edge elevation and omitting most of the time-train;

Fig. 3 is an edge view of the movement-unit showing the crystal mounted thereon;

Fig. 4 is a front perspective view of the crystal, partly broken away;

Fig. 5 is a rear perspective view of the dial-plate;

Fig. 6 is a view of the type of Fig. 2 showing a slightly-modified construction; and

Fig. 7 is a rear-perspective view of the crystal of the structure of Fig. 6.

The watch structure chosen for the illustration of the invention in Figs. 1 to 5 inclusive includes a front movement-plate 20 and a rear movement-plate 21 held in parallel spaced relationship by means of a plurality of pillars 22. Between the said front and rear movement-plates 20 and 21 is the space in which the time-train of the watch is normally mounted, though the major portion of the said time-train has been omitted for clarity of illustration, inasmuch as it per se is not here involved. The time-train referred to includes a center-wheel 23 and a center-pinion 24, both of which are mounted upon the center-arbor 25 of the watch, as shown in Figs. 2 and 3. Located forwardly of the front movement-plate 20 in parallel spaced relationship with respect thereto is a dial-plate 26 having the usual indicia marked thereon which are swept over by the usual minute- and hour-hands 27 and 28 respectively.

The dial-plate 26 is formed with a plurality of

rearwardly-bent flange-like arms 29 of various circumferential widths and spacing, dependent upon the character of the parts of the watch structure which it is desired to clear. The rear edges of the said arms 29 rest against the front face of the front movement-plate 20 and serve to maintain the dial-plate in spaced relationship forwardly of the said front movement-plate 20. Three (more or less) of the flange-like arms 29 of the dial-plate 26 are provided with retaining-fingers 30 adapted to project rearwardly through suitable perforations 31 in the front movement-plate and to be bent laterally outwardly to engage the rear face thereof and thus serve to firmly anchor the dial-plate 26 to the movement-plate in question.

The periphery of the dial-plate 26, including the outer surfaces of its rearwardly-extending flange-like arms 29, provides an outwardly-facing crystal-seat over which is fitted the rearwardly-extending terminal-flange 32 of a crystal 33 preferably made of celluloid, pyralin, or equivalent material, though not so limited. The crystal 33, in addition to being provided with the terminal-flange 32 which provides an inwardly-facing clamping-surface 32<sup>a</sup>, is shaped to provide a rearwardly-facing stop-shoulder 34 which is adapted to engage the forward face of the dial-plate 26 adjacent the periphery thereof. The terminal flange 32 of the crystal 33 is notched as at 32<sup>b</sup> to clear the winding-and-setting mechanism not shown.

The shaping of the edge of the crystal 33 as just above described also provides an outwardly-facing annular shoulder 35 adapted to be engaged by that portion of a front case-member 36 which lies adjacent a sight-aperture 37 in the said case-member, through which aperture the face of the dial-plate 26 and the hands 27 and 28 are visible. The center portion of the crystal 33 extends outwardly through the sight-opening 37 in the front case-member 36, as particularly well shown in Fig. 2. The ring-like front case-member 36 is provided with a rearwardly-extending annular flange 38 telescopically receiving the annular flange 39 of a back case-member 40 which is preferably of cup-shaped form, as shown. The interfitting flanges 38 and 39 of the front and back case-members 36 and 40 may be retained together by a frictional fit or by any suitable interfitting snap means such as 38<sup>a</sup> and 39<sup>a</sup>.

The terminal-flange 32 of the crystal 33 is intended to fit the periphery of the dial-plate 26 with a sufficient degree of snugness to insure that the said crystal will remain attached to the move-

ment-plate assembly, of which the dial-plate 26 forms a part, when the case-members 36 and 40 are separated and the said movement assembly is removed for inspection, adjustment or repair.

5 In Fig. 6 is shown a movement-and-case-unit corresponding to that shown in the preceding figures, but in this instance a crystal 41 is employed which varies slightly from the crystal 33 before described. Like the crystal 33, the crystal 10 41 is provided with a substantially-annular terminal-flange 42 which may snugly fit the periphery of the dial-plate 26 and, in addition, is provided with three (more or less) retaining-fingers 43 inwardly bent from the said terminal-flange 42, as particularly well shown in Fig. 7. By employ- 15 ing a suitable number of retaining-fingers such as 43, it is not necessary to rely upon the frictional grip of the terminal-flange 42 upon the periphery of the dial-plate 26 to insure that the 20 crystal 41 will normally remain in assembled relationship with the dial-plate.

Like the crystal 33, the crystal 41 is provided with a stop-shoulder 44 engageable with the dial-plate 26 and also with an outwardly-facing shoulder 25 45 which is engageable by the front case-member 36.

The invention may be carried out in other specific ways than those herein set forth without departing from the spirit and essential characteristics of the invention, and the present embodiments are therefore to be considered in all respects 30 as illustrative and not restrictive, and all

changes coming within the meaning and equivalency range of the appended claims are intended to be embraced therein.

I claim:

1. A watch structure including in combination: 5 a movement-unit comprising a front movement-plate and a rear movement-plate secured together in spaced relationship, a third plate-like member secured to the said front movement-plate and offsetting forwardly therefrom in spaced 10 relationship with respect thereto; a crystal having a rearwardly-extending terminal-flange embracing the periphery of the said plate-like member; and casing-means for the said movement-unit, including a front case-member and a back case- 15 member, each having an offsetting flange telescopically engaging with the flange of the other case-member.

2. A watch structure including in combination: a movement-unit comprising a front movement- 20 plate and a rear movement-plate secured together in spaced relationship, a dial-plate secured to the said front movement-plate and offsetting forwardly therefrom in spaced relationship with respect thereto; a crystal having a rearwardly- 25 extending terminal-flange embracing the periphery of the said dial-plate; and casing-means for the said movement-unit, including a front case-member and a back case-member, each having an offsetting flange telescopically engaging with the 30 flange of the other case-member.

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