

J. F. SANDOZ.
EIGHT DAY WATCH.
APPLICATION FILED JUNE 17, 1908.

963,398.

Patented July 5, 1910.

Fig. 1.

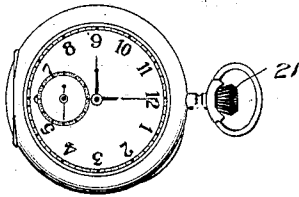


Fig. 2.

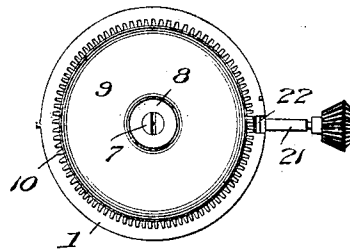


Fig. 3.

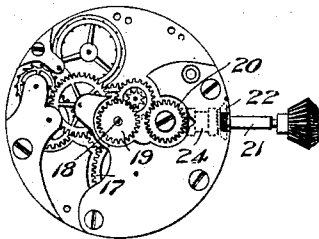


Fig. 4.

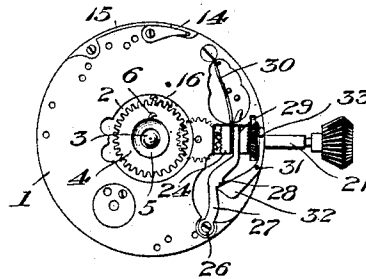


Fig. 5.

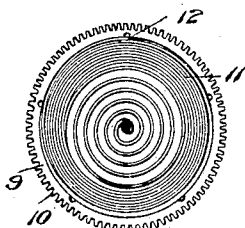


Fig. 6.



Fig. 7.

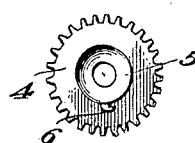


Fig. 8.

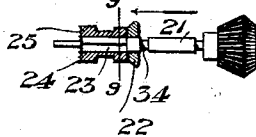


Fig. 10.

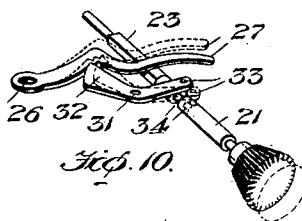
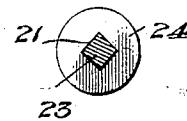


Fig. 9.



Witnesses

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384

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Inventor
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his Attorney

UNITED STATES PATENT OFFICE.

JULES F. SANDOZ, OF PALMYRA, NEW JERSEY.

EIGHT-DAY WATCH.

963,398.

Specification of Letters Patent.

Patented July 5, 1910.

Application filed June 17, 1908. Serial No. 439,033.

To all whom it may concern:

Be it known that I, JULES F. SANDOZ, a naturalized citizen, residing at Palmyra, county of Burlington, and State of New Jersey, have invented certain new and useful Improvements in Eight-Day Watches, of which the following is a specification.

My invention relates to eight day watches.

Heretofore in eight-day watches the construction has been such that it necessitated having a visible balance wheel occupying the position of the usual second hand and dial in an ordinary watch.

The present invention has for its object the provision of an eight day watch of novel construction and arrangement of parts whereby the watch may be made in ladies' and other small sizes without detracting from its time keeping properties, which will be accurate and durable, easy to repair, capable of being manufactured at comparatively small cost, and which will obviate the use of the visible balance wheel and employ a second hand and dial, as in ordinary watches.

Another object of the invention is to provide, in a watch, novel stem setting and winding means.

The invention is set forth fully herein after and the novel features are recited in the appended claim.

In the accompanying drawings:—Figure 1 is a front view, actual size, of a watch having my improvements; Fig. 2, an enlarged detail back or rear view showing the exterior of the spring barrel; Fig. 3, an enlarged detail view, the dial and hands having been removed; Fig. 4, a view like Fig. 2 but with the spring barrel removed; Fig. 5, a detail inner view of the spring barrel; Fig. 6, a detail of the inner end of the spring; Fig. 7, a detail of the intermediary or eight day wheel which receives the force of the spring; and Figs. 8, 9, and 10, details of the winding and setting mechanism.

While Fig. 1 represents the actual size of a ladies' watch which I have made embodying the present invention, the present watch may be made even smaller and this view is merely illustrative.

The works are carried by the usual disk like frame 1 which in its rear face has a recess 2 with a central raised hub 3 on which is journaled the intermediary or eight day wheel 4 having a hub 5 provided with a hook 6. Screwed into the hub 3 is a screw 7

which has a washer 8, while pivoted on said screw 7 under the washer 8 is a dished spring barrel 9 the outer face of which is seen in Fig. 2 and the inner face in Fig. 5, said barrel having gear teeth 10 around its periphery. The eight day spring 11 is carried within the dished barrel and has one end secured thereto at 12, the other end, which is of the construction shown in Fig. 6, and has the slot 13, being engaged with the hook 6. A pawl 14 pivoted to the frame 1 is held in engagement with the teeth 10 by a spring 15 secured to frame 1, thereby retaining the spring barrel in the position to which it is wound, unwinding the spring 11 through the intermediary or eight day wheel 4 driving the train of the watch through a gear 16 with which it directly meshes (Fig. 4), said gear 16 being on the same shaft with gear 17 (Fig. 3) which drives the train, the minute arbor being shown at 18, surrounding and turning on which is the hour gear 19 whose hub turns the hour hand of the watch. The train of wheels 20 are for setting the hands from the setting mechanism. The stem 21 passes loosely through a pinion 22 which is in mesh with the teeth 10 so that on turning the said pinion by the stem, the spring barrel 9 will be wound up. The stem has a squared part 23 where it passes through and fits a correspondingly squared bore in a coupler pinion 24, said pinion being adapted to be made to engage with the first gear of the train 20 when it is desired to set the hands. The coupler pinion has a ratchet face 25 at its opposite end adapted to engage a corresponding face on the pinion 22.

Pivoted at 26 to the frame 1 is a lever 27 having ratchet teeth 28, the free end of the lever lying in a peripheral groove 29 in the coupler pinion and being pressed by a leaf spring 30 so that the normal tendency of the coupler pinion is to cause the ratchet faces 25 to engage so that on turning the stem the spring barrel will be wound up.

Pivoted at 31 to the frame 1 is a pawl 32 one of whose ends is adapted to engage with the ratchet teeth 28, its other end being provided with a tooth 33 adapted to be received in a circumferential groove 34 in the stem 21.

On turning the stem 21 the rotation of the coupler pinion 24 and its engagement with the loose winding pinion 22, causes the spring wheel 9 to be turned and the spring

wound up, the wheel 9 being retained by the pawl 14. To set the hands the stem is pulled out, which action, by virtue of the engagement of the pawl 32 with the groove 34
5 causes the lever 27 to be pushed inwardly toward the center of the frame, carrying with it the coupler pinion which then becomes engaged with the train 20, the pawl 32 engaging either of the teeth 28 and retaining the parts in setting position. A
10 slight manipulation of the stem releases the aforesaid engagement and the parts snap back to their former positions.

Having thus described my invention, what
15 I claim as new and desire to secure by Letters Patent, is:—

In an eight day watch, the combination with the watch back-plate, of an intermediary or eight day wheel for operating the
20 watch train which is journaled concentric-

ally to the watch back-plate, a one-membered or single rotary hollow spring barrel also mounted on the back-plate concentrically thereto and approximating in size to the back-plate, a spring contained within
25 the hollow spring barrel and having one end connected to the eight day or intermediary wheel and its other end connected to the spring barrel, said spring barrel having ratchet teeth, a pawl on the back-plate which
30 engages with the ratchet teeth, and a winding stem having a pinion engaging the teeth of the spring barrel.

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

JULES F. SANDOZ.

Witnesses:

JULIUS C. HAAS,
GEO. L. ROTE.