

J. H. GORMAN.
WATCH POTENCE OR BALANCE FOOT.
APPLICATION FILED MAY 29, 1907.

934,305.

Patented Sept. 14, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

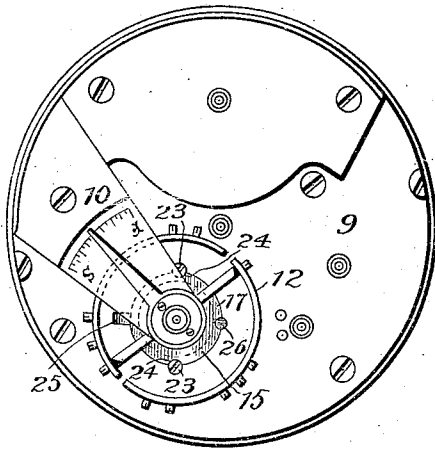


Fig. 2.

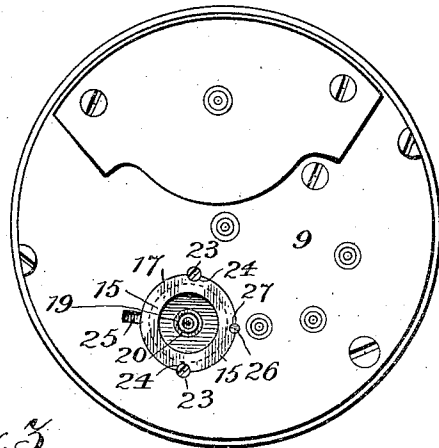


Fig. 3.

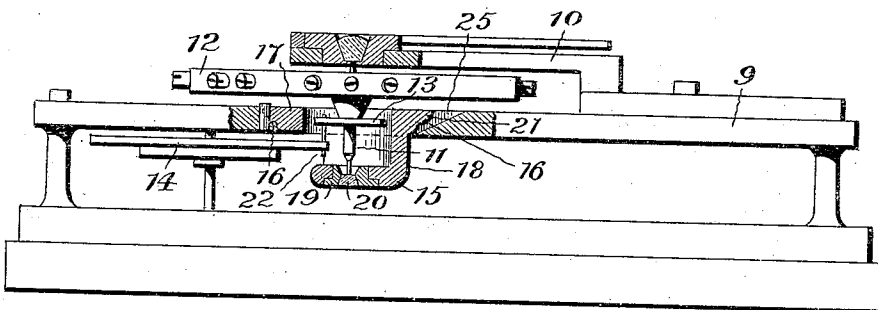
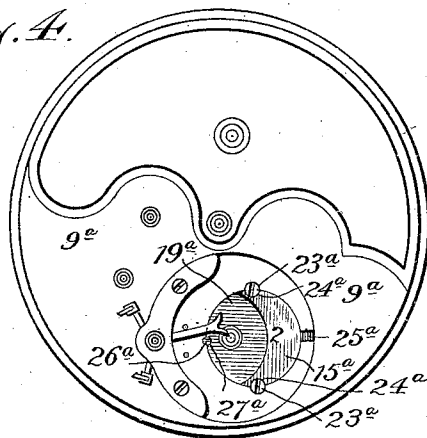


Fig. 4.



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2 SHEETS—SHEET 2.

Fig. 5.

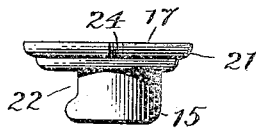


Fig. 6.

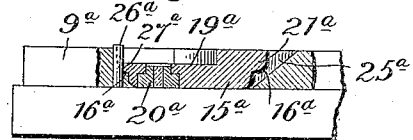


Fig. 7.

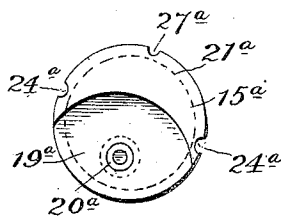


Fig. 8.

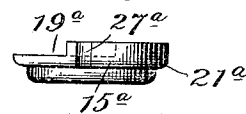
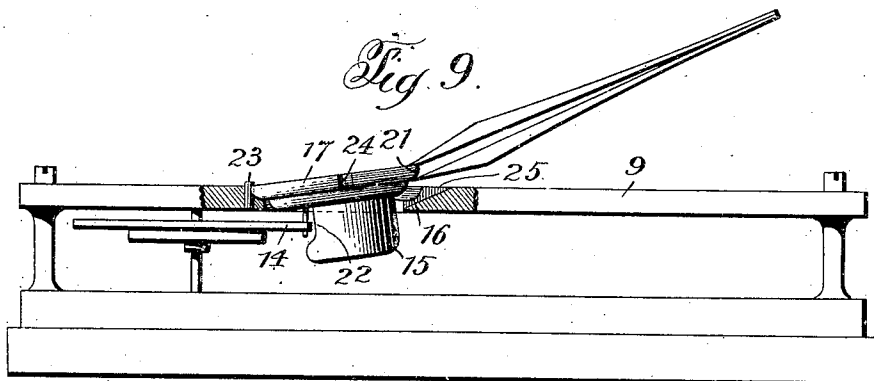


Fig. 9.



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UNITED STATES PATENT OFFICE.

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WATCH POTENCE OR BALANCE-FOOT.

934,305.

Specification of Letters Patent. Patented Sept. 14, 1909.

Application filed May 29, 1907. Serial No. 376,446.

To all whom it may concern:

Be it known that I, JOHN H. GORMAN, a citizen of the United States, residing at Salisbury, in the county of Rowan and State of North Carolina, have invented certain new and useful Improvements in Watch Potences or Balance-Feet, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention provides an improved potence or balance-wheel foot for watch-movements which is easily removable from the top without the incidental removal of as many other parts of the movement as is now necessary with the potence or foot commonly used.

The improved potence or foot can be readily removed from the top plate of full-plate watch-movements and from the top side of the bottom plate of three-quarter plate and bridged watch-movements without disturbing the lever or train-wheels and without letting down the power of the main spring. In the case of the usual potence or balance-foot, which is secured from the bottom or under side of the top plate of full-plate watch-movements, and in three-quarter plate and bridged movements which have no potence, it is necessary to take the full-plate movement entirely apart and to remove the hands and dial from the three-quarter plate and bridged movements, for the purpose of replacing the broken balance hole and cap jewels and refitting a new balance-staff. When my potence is used, this is not necessary.

This invention also contemplates a structure having the advantage of cheapness and facility of manufacture. The opening and seat in the watch-plate for the reception and retention of the potence may be readily formed by one tool in one operation of turning or boring in the plate. No lateral projections or the like, other than a concentric flange on the potence, is present to be provided for in the plate, as is commonly the case.

The details of construction and arrangement of parts contemplated by this invention will be apparent from the accompanying drawings, forming part hereof, wherein preferable embodiment of my invention are disclosed, for purposes of illustration.

Like reference-characters refer to corre-

sponding parts in the several views of the drawings, whereof—

Figure 1 is a view of a full-plate watch-movement having my potence or balance-foot fitted thereto; Fig. 2 is a view similar to Fig. 1, with the exception that the balance-cock and balance-wheel are omitted; Fig. 3 is a view, in elevation, with parts broken away, of a movement such as shown in Figs. 1 and 2; Fig. 4 is a view of a three-quarter plate or bridged watch-movement having my potence or balance-foot fitted thereto; Fig. 5 is a side view of a potence for full-plate watch-movements; Fig. 6 is a view, in elevation, with parts broken away, of a portion of a movement such as shown in Fig. 4; Fig. 7 is a top view of a potence or balance-foot for three-quarter plate or bridged watch-movements; Fig. 8 is a side view thereof; and Fig. 9 is illustrative of the manner of removing the potence or balance-foot.

Having more particular reference to the drawings, 9 indicates the top plate, 10 the balance-cock, 11 the staff, 12 the balance-wheel, 13 the roller-table on the staff, and 14 the lever engaging the roller-table, of a full-plate watch-movement. Plate 9 is formed with a circular aperture or opening for the accommodation of the staff and of the potence 15 provided by this invention. The plate in its top surface is formed around the periphery of this perforation or aperture with a concentric seat or depression 16. This seat is formed by turning out the opening a somewhat greater diameter from the top of the plate a short distance into the plate. The opening and seat can be turned out in the plate in one operation by one tool, such a tool already being common in use in watch manufacture, and the provision of special tools for making watches as contemplated by this invention, therefore, not being necessary.

In full-plate movements, potence 15 comprises an upper flat ring-like portion 17, from which hangs a barrel portion 18, and in the lower part of the barrel is set a plate 19, carrying a staff-bearing jewel 20. The edge of portion 17 is formed with a flange 21, which rests on seat 16, the bottom of this portion being flush with the bottom surface of plate 9. One side of the barrel 18 is formed with an opening 22 to accommodate

the end of lever 14 engaging the roller-table. The potence is held in place by screws 23 in plate 9, the screws engaging countersinks or notches 24 in the potence, whereby the latter is held down in the plate and kept from turning movement therein.

In order that the potence may be readily lifted out of plate 9 when screws 23 are loosened, a groove 25 is formed in the plate and extends under ring 17 in which tweezers may be inserted so that the potence may be engaged thereby.

In three-quarter plate movements, the bottom plate 9^a of the watch is perforated and formed with a seat 16^a, as in the case of full-plate movements. The potence 15^a for such movements is formed with a flat portion 19^a carrying a bearing-jewel 20^a, and the periphery of this portion has a flange 21^a which is arranged to rest in seat 16^a. Potence 15^a is held in place by screws 23^a in plate 9^a, the screws engaging countersinks or notches 24^a in the potence, whereby the latter is held down in the plate and kept from turning movement therein.

In both the full and three-quarter plate movements, in order to insure a proper alinement of the potence when putting it in place, a steady-pin, 26 or 26^a, as the case may be, is set in the bottom plate at the edge of the aperture or opening therein, and this pin engages a notch, 27 or 27^a, in the potence, thereby insuring the proper positioning of the potence when it is placed in the watch.

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

1. In a time-piece, a plate having an opening and having a depression adjoining said opening and formed concentric therewith from the top side of said plate, said depression forming a seat, in combination with a potence set in said opening from the top side of said plate and having a portion resting on said seat.

2. In a time-piece, a plate having a circular opening therethrough, and a seat formed from the top side of said plate in and concentric with said opening, in combination

with a potence set in said opening from the top side of said plate and having a flange engaging said seat.

3. In a time-piece, a plate having a circular opening therethrough and a concentric depression in said opening from the top side of said plate constituting a seat, in combination with a potence set in said opening from the top side of said plate and having a flange resting on said seat.

4. In a time-piece, a plate having an opening and having a depression adjoining said opening and formed concentric therewith from the top side of said plate, said depression forming a seat, and a projection adjacent to said opening, in combination with a potence set in said opening from the top side of said plate having a portion resting on said seat and having a recess capable of engagement with said projection whereby a proper alinement of the potence is insured.

5. In a time-piece, a plate having a circular opening therethrough, a seat formed from the top side of said plate in and concentric with said opening, and a pin adjacent to said seat, in combination with a potence set in said opening from the top side of said plate and having a flange engaging said seat and having a recess capable of engagement with said pin whereby a proper alinement of said potence is insured.

6. In a time-piece, a plate having a circular opening therethrough and a concentric depression in the top of said plate around said opening forming a seat concentric with the opening, and a pin set at the edge of said opening and projecting into said depression laterally, in combination with a potence set from the top side of said plate in and concentric with said opening and having a flange resting on said seat, a recess being formed in said flange capable of engagement with said pin whereby rotative movement of said potence is prevented.

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Witnesses:

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