

F. B. BOUSCATIE.

Watch.

No. 67,259.

Patented July 30, 1867.

Fig. 13

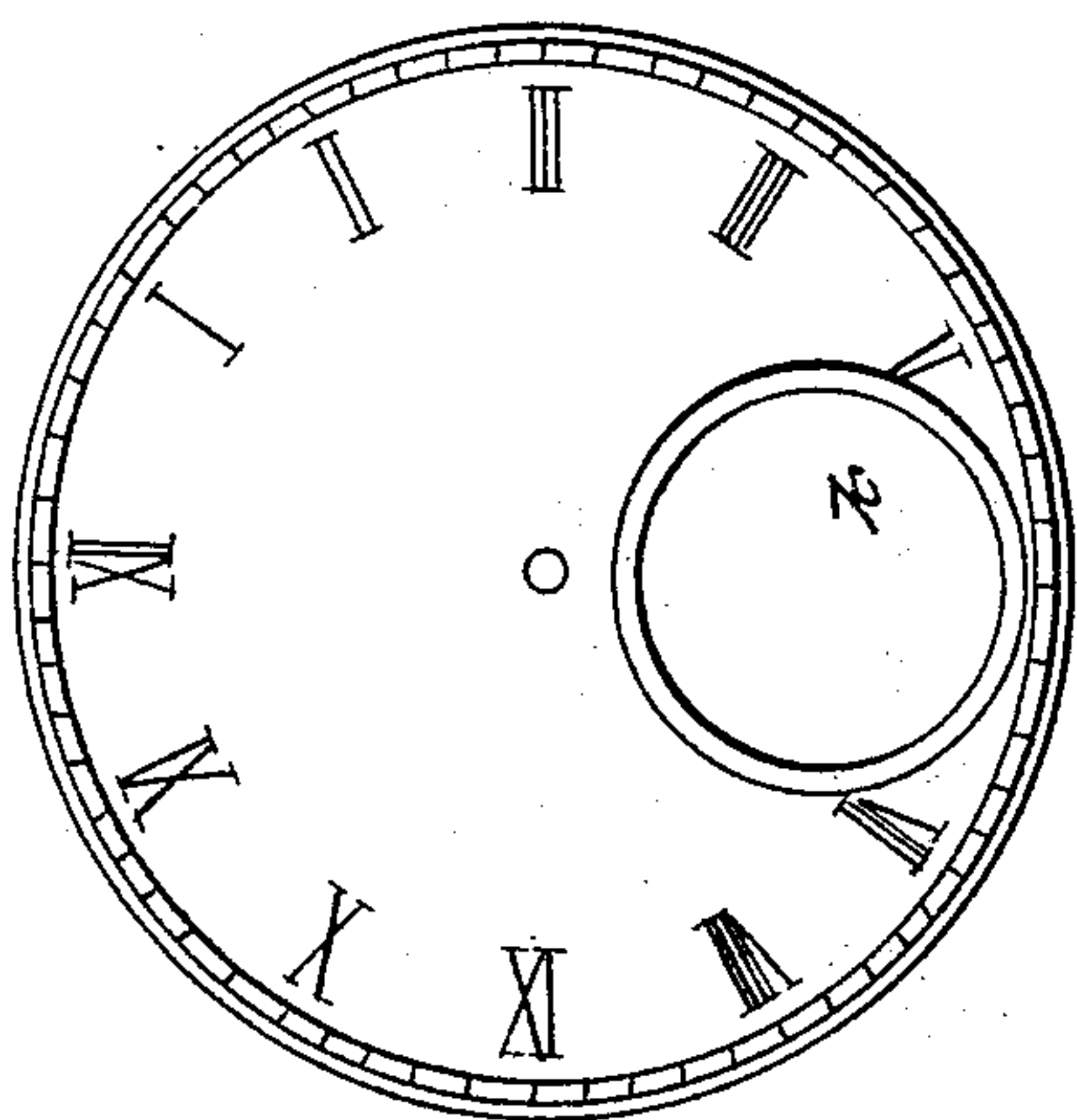


Fig. 14

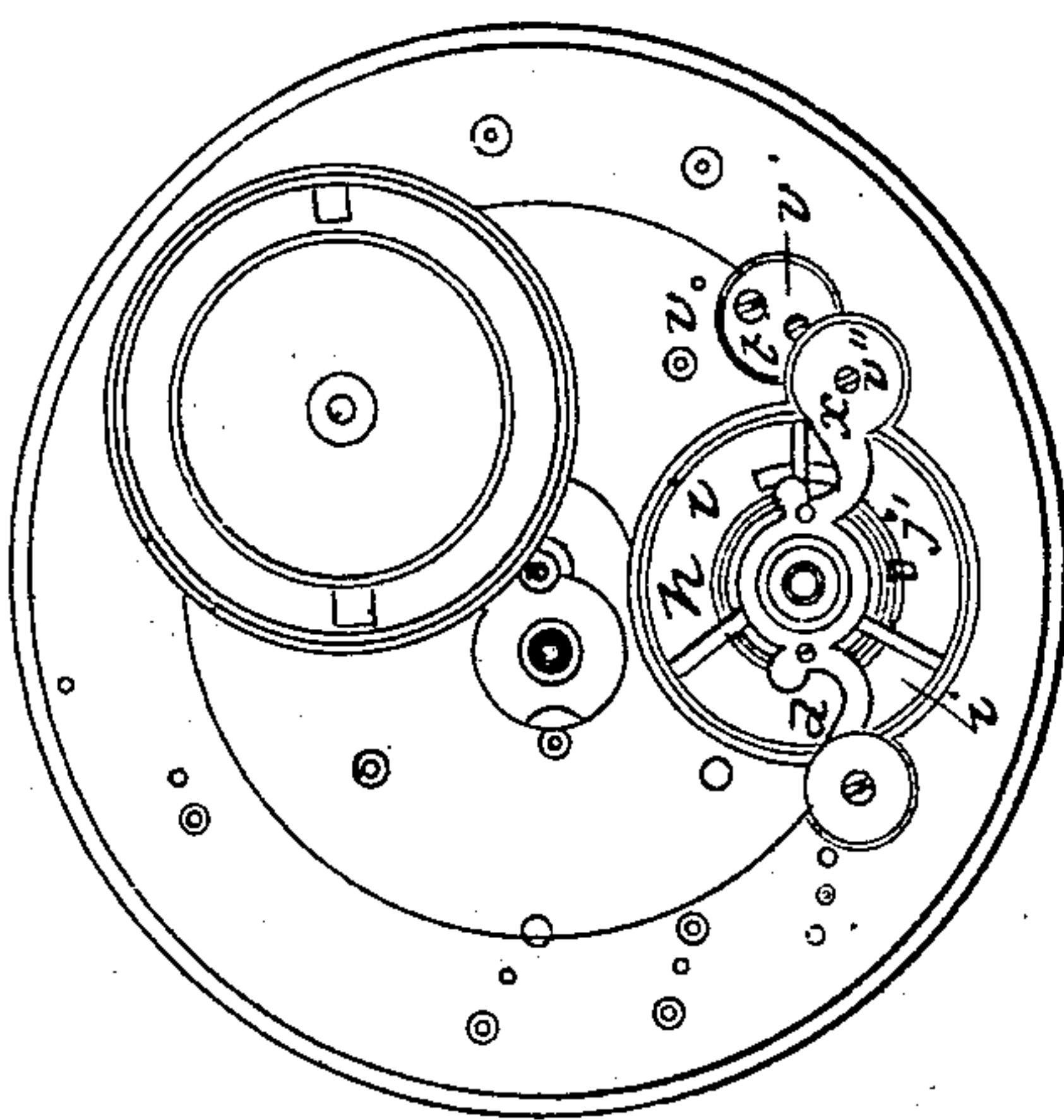


Fig. 2

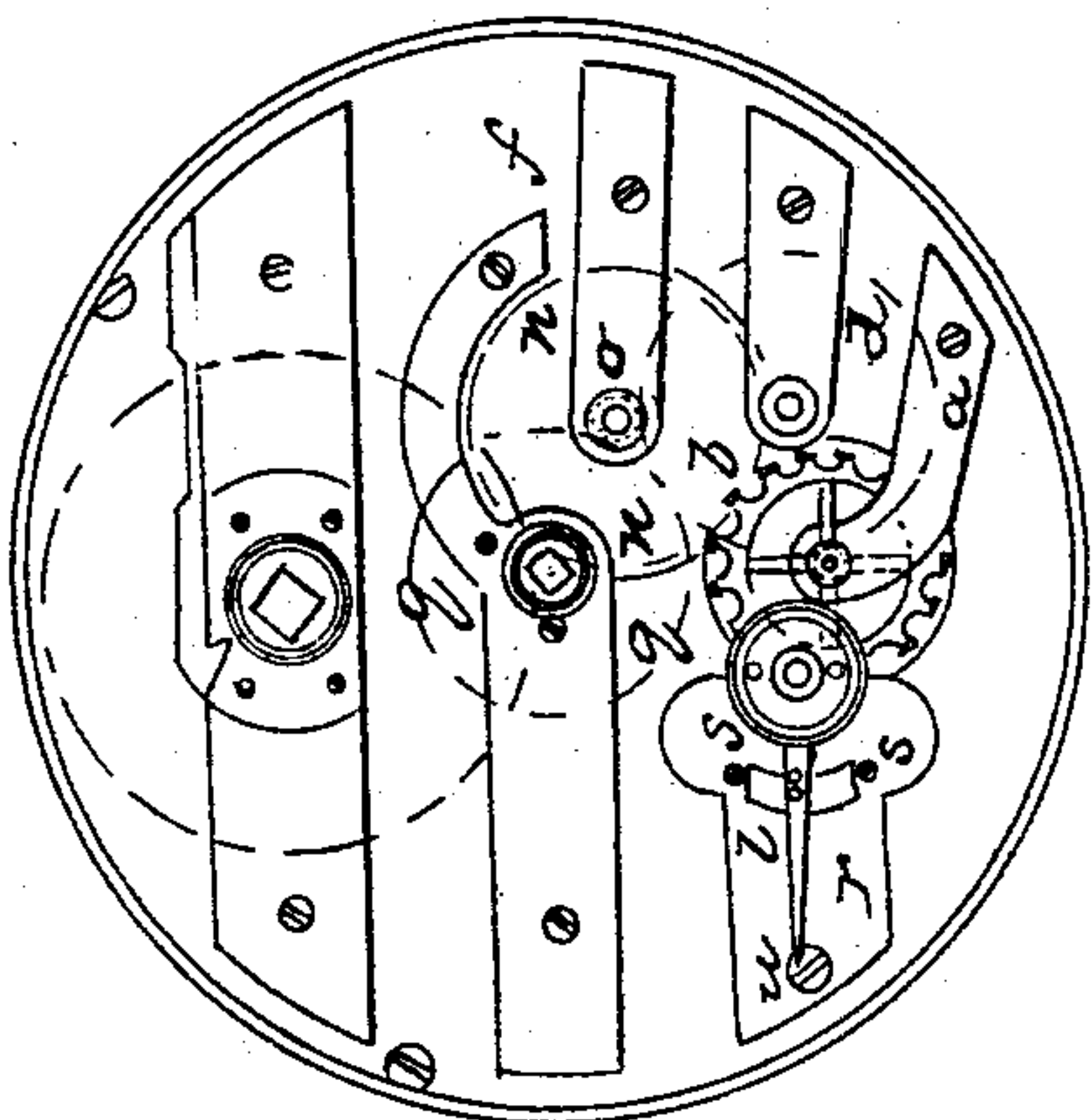
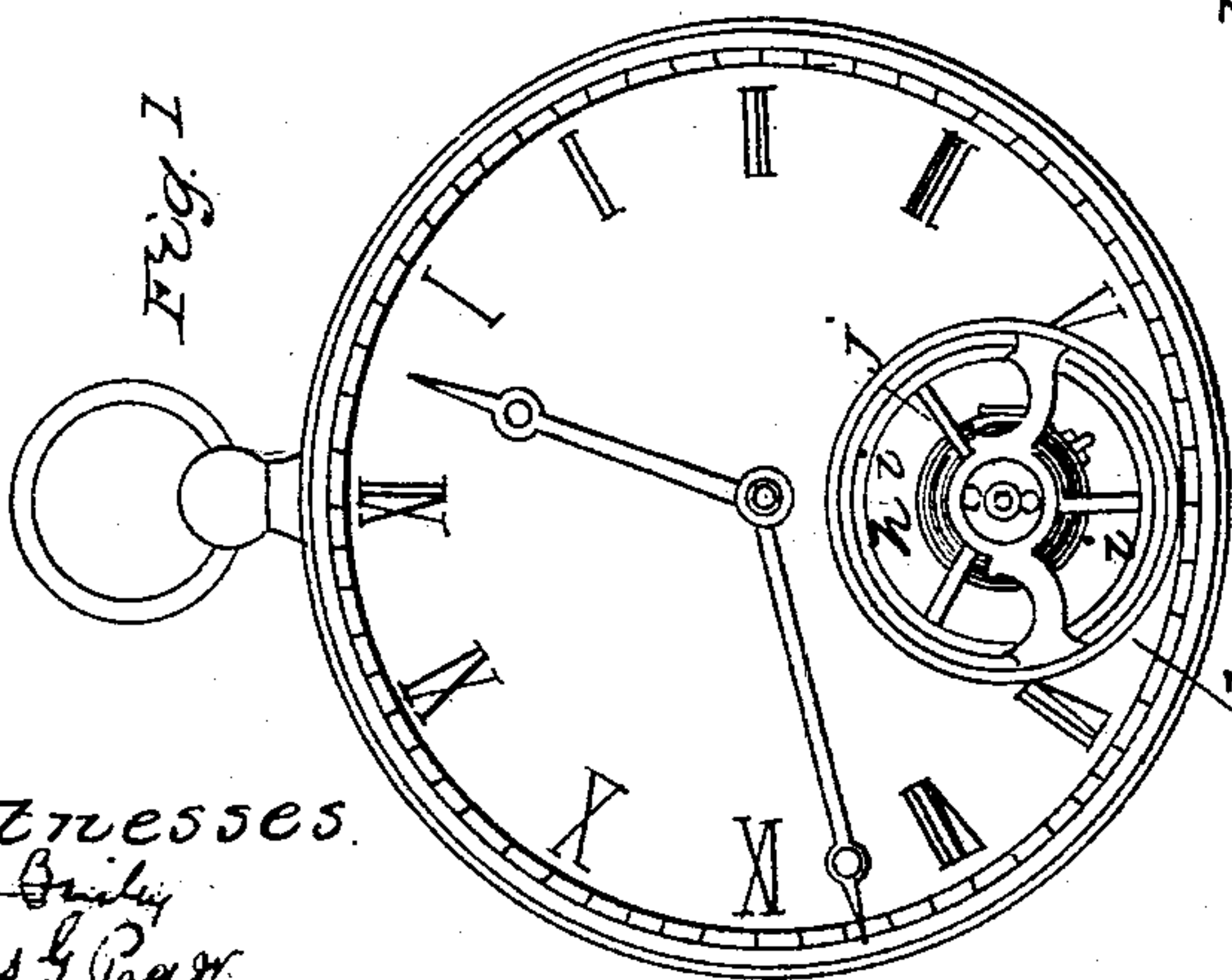


Fig. 1



Witnesses.
M. Bailey
Chas. F. Page

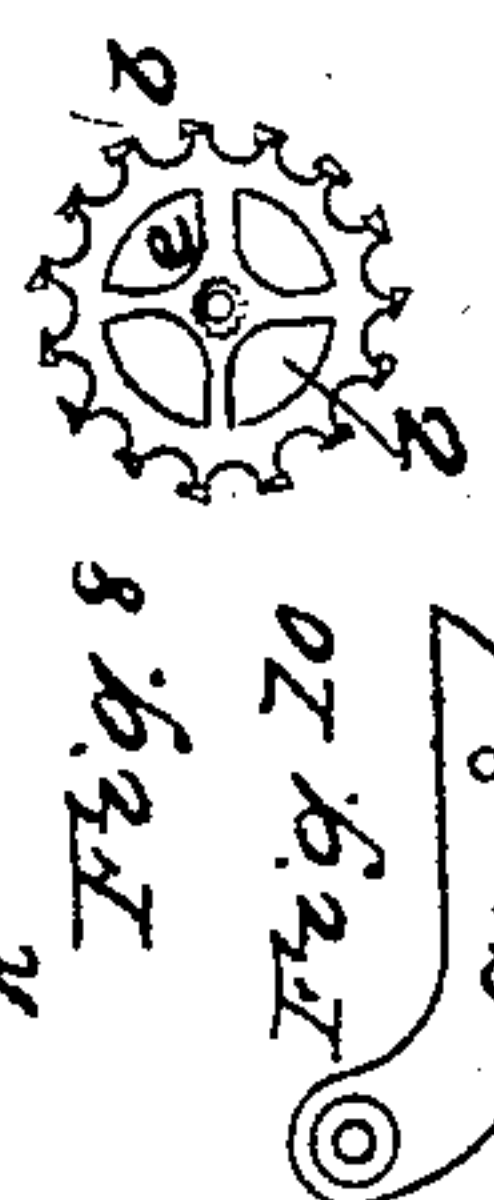
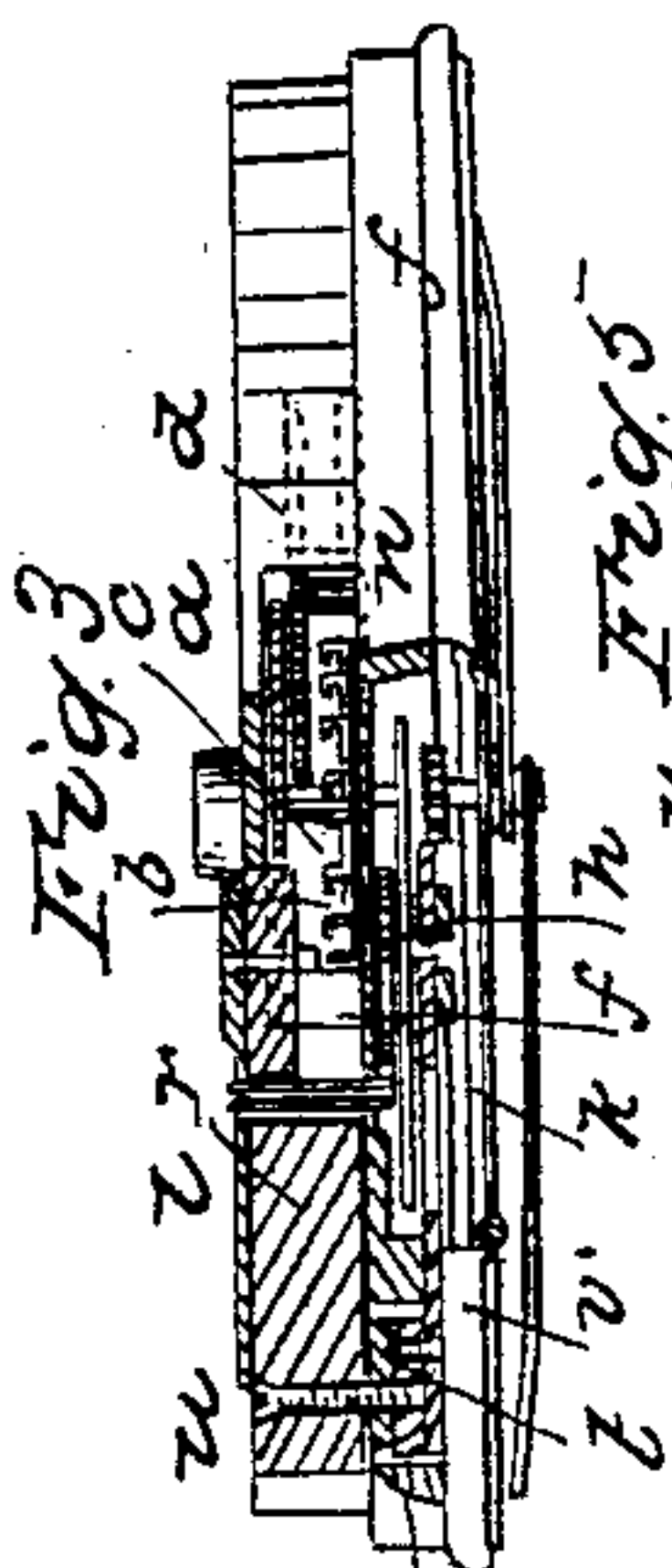


Fig. 5

Fig. 6

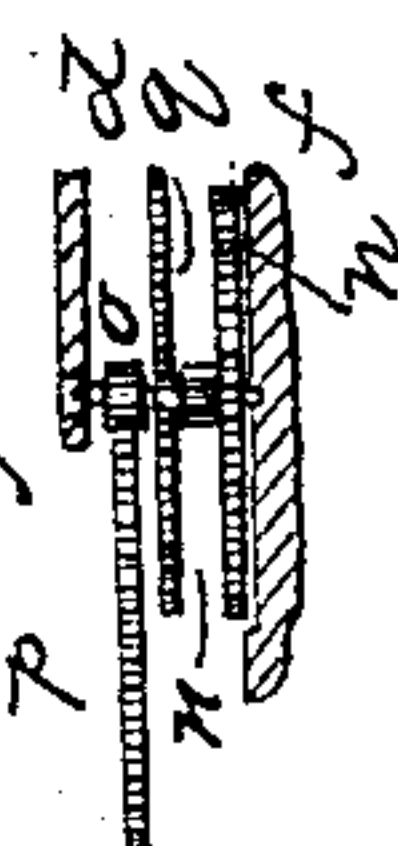
Fig. 7



Fig. 8



Fig. 9



Inventor

F. Bouscatie
by A. Pollock

United States Patent Office.

FELIX BENONI BOUSCATIE, OF PARIS, FRANCE.

Letters Patent No. 67,259, dated July 30, 1867.

IMPROVEMENT IN WATCHES.

The Schedule referred to in these Letters Patent and making part of the same.

TO WHOM IT MAY CONCERN:

Be it known that I, FELIX BENONI BOUSCATIÉ, of Paris, in the Empire of France, have invented certain new and useful Improvements in Watches and other Time-Keepers; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings.

This invention relates chiefly to watches and other time-keepers, with the balance visible in an opening formed in the dial-plate. The improvements consist, first, in placing the pinion of the scape-wheel above instead of below, as in the ordinary arrangement; second, in a new kind of supporting disk of the balance and of the escapement, allowing the escapement of the scape-wheel to advance or recede more or less, as required, for regulating the watch; it is on this supporting-disk that the visible bridge is fixed on which the arbor of the balance and of the escapement is pivoted; third, in a new arrangement of regulator. This piece carries two pins, which serve to regulate the hair-spring. They traverse the bridge and the plate, which are pierced for the purpose to allow the pins to take the hair-spring placed under the balance. A small screw is placed at each side to act as a stop to the tail of the regulator, in order to prevent the pins becoming deteriorated by striking against the bridge of the escapement; and fourth, in a new arrangement of the bridge carrying the scape-wheel, which allows of its being on a level with the other bridges and of the same strength. This arrangement adds more solidity to and gives greater space for the working of the scape-wheel.

The old bridge of the scape-wheel was below, and very thin, in order to give passage to the pallets of the scape-wheel, whereby it was much weakened; thus when the third wheel geared into the pinion of the scape-wheel, the bridge sometimes formed a spring and prevented the regular movement of the watch. By fitting, on the contrary, the pinion above, the watchmaker is able to see if the gearing is good. The third wheel, according to this invention, is no longer a receptacle for dirt, which can fall into the watch without being as before a cause of stoppage. In consequence of the arrangement of the scape-wheel with the pinion above, the balance traverses the plate, and is lodged in a cavity below the level of the dial-plate, so as to leave a space which receives a glass independent of the outer glass. This independent glass covers the cavity of the dial-plate without interfering with the movement of the hands, and prevents the entrance of dirt which tends to get under the ordinary glass of the watch-case. The working of the balance may thus be seen at the face of the watch. This change of the wheel and balance gives more room in the interior of the watch for a remontoir to be fitted therein if required. The arrangement is also applicable where the dial-plate is not formed with an opening to expose the balance. The improvements before recited will be fully understood by the annexed drawings.

Figure 1 is a face view of a watch constructed according to these improvements.

Figure 2 is a back view, and

Figure 3 a transverse section.

Figure 4 is a face view, with the dial-plate removed to show the supporting disk and the manner of fixing the visible bridge of the balance to the plate of the watch.

Figure 5 is a section taken at the place of the bridge of the escapement to show the method of maintaining the supporting disk to the plate of the watch and to the bridge.

Figures 6 and 7 are front and side views of the supporting disk.

Figures 8 and 9 are front and side views of the scape-wheel with its pinion above.

Figures 10 and 11 are face and side views of the bridge of the scape-wheel.

Figure 12 shows an arrangement of the second wheel with its pinion formed with a neck to allow passage to the third wheel.

Figure 13 is a view of the dial-plate detached to show the opening covered by a glass independent of the ordinary watch-glass.

a is the bridge, on which is pivoted the scape-wheel *b*, carrying its small pinion *c* above instead of below, as in ordinary watches. The bridge *a* is on a level with the other bridges, and is of the same solidity. The pinion *c* is actuated by the third wheel *d*, which is pivoted on the bridge *e*, and it communicates its movement to the escapement which traverses the plate *f*, and on which the hair-spring *h*, which actuates the balance *i*, is mounted. The balance *i* and spring *h* are placed in a cavity, *j*, of the dial-plate, and have sufficient room in

the cavity for a glass, *k*, independent of the watch-glass, and which does not interfere with the hands, as it is flush with the dial-plate. *l* is the regulator; it carries the pins for regulating the quicker and slower movement. *n* is the second wheel, carrying a pinion, *o*, divided into two parts by a neck, *p*, to give passage to the third wheel. The first wheel *q* gears only into the upper part of the pinion *o*, as seen in fig. 12. *r* is the bridge of the escapement, provided with its two screws, *s s*, which act as stops to the regulator *l*. This bridge is fixed to the supporting-disk *t* by means of the screw *u*. The supporting-disk *t* is also fixed to the plate by two screws, *v v'*; another screw *v''* maintains the visible bridge *x* of the balance to the supporting disk *t*.

The improvements before described are also applicable to all time-keepers, such as those with anchor escapements, spring escapements, duplex-spring escapements, remontoir escapements, and others.

Having now described my invention, and the manner in which the same is or may be carried into effect, what I claim and desire to secure by Letters Patent, is—

1. The combination with the bridge of the escapement of the scape-wheel and its pinion, under the arrangement and for operation as herein set forth.
2. The construction and arrangement of the disk for supporting the balance and escapement, substantially as herein described.
3. The combination with the supporting-disk of the bridge and balance, and escapement pivoted on the same, as shown and described.
4. The combination and arrangement of the regulator with the balance-wheel and its hair-spring, substantially as and for the purposes herein set forth.
5. The arrangement of the bridge for carrying the escapement, substantially as and for the purposes described.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

F. BENONI BOUSCATIE.

Witnesses:

A. GRAUSTROEM,
E. SHERMAN GOULD.