

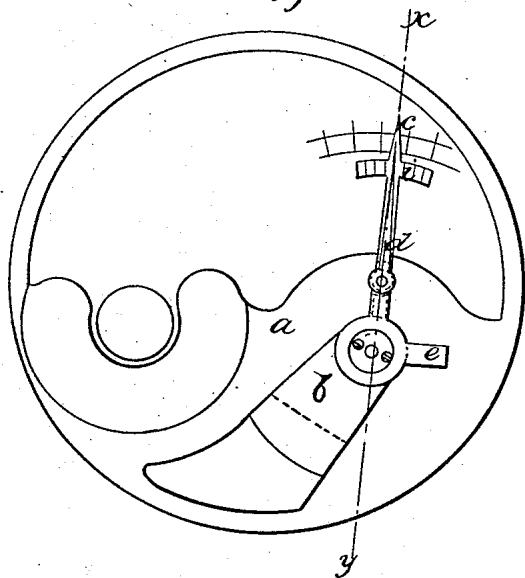
*F. A. Jones,*

*Watch Regulator,*

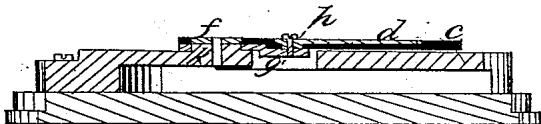
*N<sup>o</sup> 86,411.*

*Patented Feb. 2, 1869.*

*Fig. 1.*

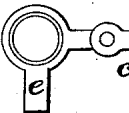


*Fig. 2.*

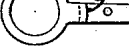


*Fig. 4.*

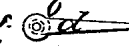
*Fig. 5.*



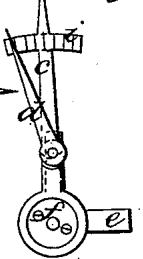
*Fig. 6.*



*Fig. 7.*



*Fig. 3.*



*Witnesses: J. H. Adams  
M. S. G. Wilde*

*Inventor:  
F. A. Jones*



FLORENTINE A. JONES, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 86,411, dated February 2, 1869.

IMPROVEMENT IN WATCH-REGULATOR.

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

Be it known that I, FLORENTINE A. JONES, of Boston, in the county of Suffolk, and State of Massachusetts, have invented a new and useful Improvement in Regulators of Watches, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a plan view of a watch-plate, with my improvement applied.

Figure 2 is a section of the same, on the line  $xy$  of fig. 1.

Figure 3 is a view of the regulator-head.

Figures 4, 5, 6, and 7, are details of the same.

The object of my invention is to provide a means for effecting the finer adjustment of the regulator of a watch or chronometer; and

The invention consists in the combination of a large or main and a smaller or supplementary hand, attached to each other and to the arm of a supporting-ring, by means of a screw or pin, the supplementary hand being provided on its under side with an eccentric-hub, or boss, by which the larger or main hand is moved over a small space while the supplementary hand is passing over a more extended space on an index forming a part of the main hand.

Referring to the drawings—

$a$  represents the bottom plate of a watch, to which is attached the bridge  $b$ , in the usual manner.

Surrounding the dome,  $k$ , on the bridge  $b$ , is a ring,  $g$ , provided with an arm,  $g'$ , in the usual manner.

Supported upon the ring  $g$  is the long regulator-hand  $c$ , which is secured in position by means of a circular plate,  $f$ , attached to the dome by screws.

The edges of the circular plate are bevelled inward from the upper side, to fit within a corresponding bevel in the head of the long hand, thus holding the long hand securely, and, at the same time, allowing a free movement of the same on its axis.

$e$  is the projection to which the pins that control the hair-spring are attached.

Near the end of the long hand  $c$  is an index,  $i$ , for determining the movement of the short hand  $d$ .

$d$  represents a short hand, provided on the under side of its head with a hub,  $h$ , which is made eccentric to a hole in the centre of the head of the short hand.

The hub  $h$  fits snugly in a hole in the large hand  $c$ , as shown in fig. 2.

The two hands are secured together, and to the arm  $g'$  of ring  $g$ , by means of a screw or pin, as shown in fig. 2.

The index  $i$ , on the long hand, may be attached, or form a part of the same, and is designed to be graduated so as to determine the degree of movement of the short hand.

The hub on the head of the short index-hand may be made a part of or affixed to the same in any suitable manner.

The ring  $g$ , with the short arm  $g'$ , is attached to the dome of the bridge in the usual manner, and has a free movement on the same, independently of that of the long hand, when not connected to the latter by the screw or pin, and also allowing a corresponding free and independent movement of the long index-hand without being itself disturbed.

It will thus be seen that by moving the long index-hand, all the connecting-parts move together as one regulator, for making the coarse adjustment.

When it is desired to make the finer adjustment, the short hand,  $d$ , is moved, and by reason of the eccentric-hub working in the hole in the long hand, and their connection with the short arm  $g'$  by a screw or pin, the short arm, which sustains the screw, becomes stationary, and acts as a fulcrum to the short hand  $d$ , and by this means a very limited movement will be imparted to the long hand  $c$ , while the short hand  $d$  is passing over a much more extended space, as will be indicated by the graduated arc on the long hand.

The ring  $g$ , with its arm  $g'$ , may be arranged over the long hand, instead of below the same, as described, and the pins which control the hair-spring may be attached to an arm on the said ring, the short hand being correspondingly changed to operate in conjunction with the same, if found desirable.

Having thus described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a regulator for watches or chronometers, of two hands, attached to each other, the smaller operating the larger, substantially as and for the purposes set forth.

2. The eccentric-hub  $h$ , on the short hand  $d$ , in combination with the perforated hand  $c$  and the short arm  $g'$ , as and for the purpose specified.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

FLORENTINE A. JONES.

Witnesses:

JOS. H. ADAMS,  
M. S. G. WILDE.