

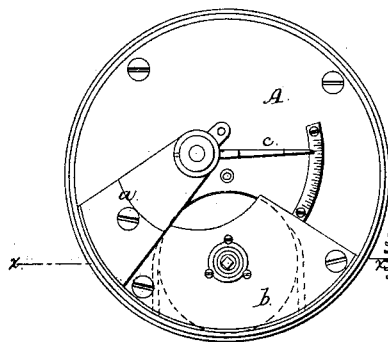
*D. G. Currier.*

*Watch Movement.*

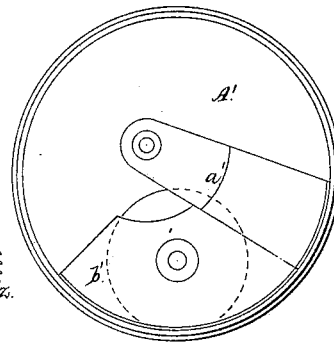
*N<sup>o</sup> 108,332.*

*Patented Oct. 18, 1870.*

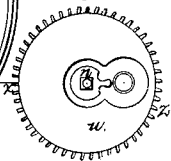
*Fig. 1.*



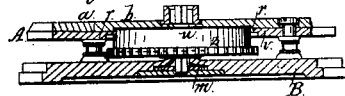
*Fig. 6.*



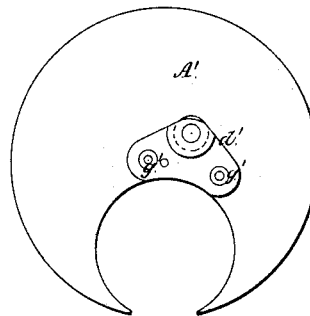
*Fig. 5.*



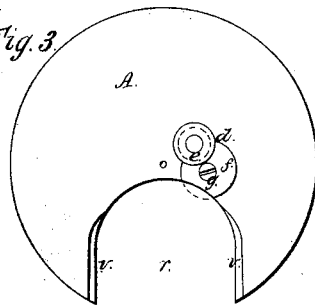
*Fig. 2.*



*Fig. 7.*



*Fig. 3.*



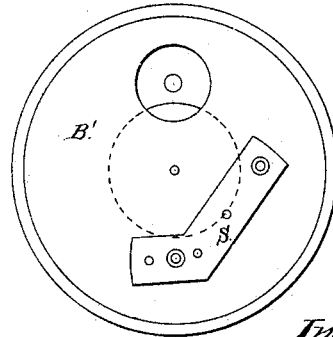
*Fig. 9.*



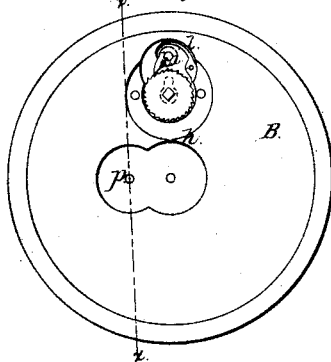
*Fig. 10.*



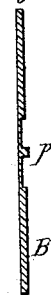
*Fig. 8.*



*Fig. 4.*



*Fig. 11.*



*Inventor.*

*D. G. Currier*  
*per Brown & Co.*

*Witnesses.*

*Hollere*  
*Skinner*

# United States Patent Office.

DANIEL G. CURRIER, OF WALTHAM, MASSACHUSETTS.

Letters Patent No. 108,332, dated October 18, 1870.

## IMPROVEMENT IN THE CONSTRUCTION OF WATCHES.

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

### To all whom it may concern :

Be it known that I, DANIEL G. CURRIER, late of Waltham, Massachusetts, now of Springfield, in the county of Sangamon and State of Illinois, have invented a new and useful Improvement in Watches; and I hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

In the accompanying drawings—

Figure 1 is a top view of the top plate of a watch-movement, with barrel-bridge and balance-bridge thereon.

Figure 2 is a transverse section on line *x x*, fig. 1.

Figure 3 is an inverted plan of top plate, with potance thereon.

Figure 4 is a bottom view of the pillar-plate.

Figure 5 is a view of the lower side of the barrel and stop-works.

Figure 6 is the upper side of an ordinary watch-plate.

Figure 7 is the under side of the same.

Figure 8 is a view of the under side of the pillar-plate, with the third bridge seen at *S*, as commonly used.

The same letters refer to the same parts in the different figures.

My invention consists—

First, of making a very thick pillar-plate, and in forming pins in the same piece with the pillar-plate;

Second, in making a projection or boss, by means of swedging; and

Thirdly, in a groove in the index side of the top plate, to allow the barrel to be removed.

In the construction of my improved watch, the balance-bridge or cock *a*, fig. 1, is on the side of the barrel-bridge *b*, opposite to the similar bridge seen at *a'*, fig. 6, which represent the usual watches.

By this arrangement the barrel-bridge may be made shorter, as it does not require to reach across the third wheel, as in the old way.

Also, the index *c* of the regulator has its heel on one side of the center of the watch, and its point on the other side of the center, and thus a longer index-arm may be used, and yet preserve the harmony of arrangement, while a longer scale and finer graduation may be employed. Therefore, I secure a more sensitive regulator, and at the same time improve the appearance of the watch, by giving the regulator a more central position.

The potance *d*, figs. 3 and 9, which serves as a step for the lower end of the balance-staff, is made very compact, having a circular base and circular projection, *g*, Figure 9, with the common semicircular recess in the side of the base. By this construction the potance can be completely finished by turning in a

lathe, and three times setting in the chuck. It is held in place by a single screw and three steady pins.

Instead of recessing, in the usual way, nearly the full face of the pillar-plate, and then employing a third bridge to hold the pivots of the third, fourth, and escapement-wheels, I leave or form the main portion of this plate thick enough to dispense with the third bridge, and then I recess the plate for imbedding the motion-wheels. And in making this recess, I leave or form a pin, made from the substance of the plate itself, as shown in Figure 11, at *p*, for the minute-wheel.

Also, in recessing for the click work, I leave or form a similar solid pin, *i*, fig. 4, formed from the substance of the plate itself, for holding the click or pawl.

The click work is covered by a circular plate, *t*, Figure 10, which is imbedded so as to come flush with the general surface of the pillar-plate, and serves for the support to the lower pivot of the main wheel or barrel.

In this construction of watch, it has been necessary to remove not only the barrel-bridge *b*, fig. 1, but also the top plate *A*, in order to remove the barrel.

But I have cut away the lower edge, or part of the thickness of the top plate, as shown at *V V*, fig. 3, in order to let the barrel-teeth pass, and thus allow the removal of the barrel or main-wheel without removing the top plate.

After the plate *B* is recessed and the top or face stoned off, and before it is gilded, a projection is forced up, by swedging the thin metal, in order to form a boss or projection, *m*, fig. 2, for holding the male stop, and thus preventing it from dropping out of gear with the female stop. This construction is cheaper and better than a turned boss or a washer.

The face of the plate can be stoned off with ease, and yet it is all in one piece, and there is no washer to make or lose.

The base of the potance may be made very compact, and held with one screw, as above described, as, for instance, it may be triangular, or only partially circular, but I prefer the circular potance, above described.

I do not herein claim the arrangement of the balance-bridge, and the construction of the potance, as I have made application for a separate patent for those devices.

Having thus fully described my invention,  
I claim—

1. The above-described plate *B*, when its face is left flush, or nearly flush, with the dial-seat, in order to dispense with the third bridge, substantially as described.

2. A pin or pins, formed in a recess, from the

substance of the plate itself, substantially as set forth.

3. The above-described boss or projection *m*, when formed by swedging or forcing up the thin metal, substantially as specified.

4. The under-cut or beveled edge, on the under side of the barrel-opening of the top plate, to facil-

itate the removal of the barrel, substantially as set forth.

DANIEL G. CURRIER.

Witnesses:

F. M. STOWE,

WASHINGTON GILBERT.