

F. A. LANGE.  
Watch-Plate.

No. 161,244.

Patented March 23, 1875.

Fig. 2.

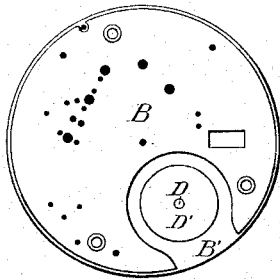


Fig. 1.

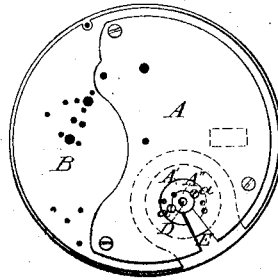


Fig. 3.

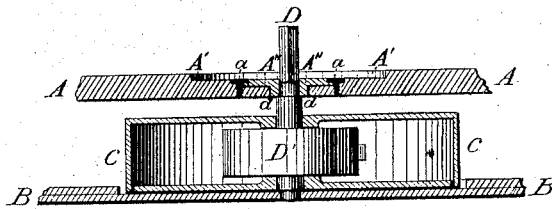
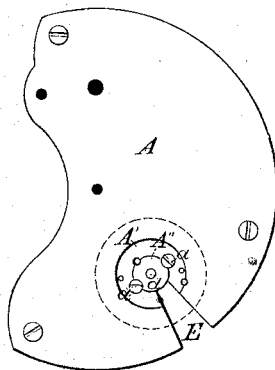


Fig. 4.



Attest:

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# UNITED STATES PATENT OFFICE.

FERDINAND A. LANGE, OF GLASHÜTTE, SAXONY.

## IMPROVEMENT IN WATCH-PLATES.

Specification forming part of Letters Patent No. **161,244**, dated March 23, 1875; application filed February 9, 1875.

*To all whom it may concern:*

Be it known that I, FERDINAND ADOLF LANGE, of Glashütte, Saxony, have invented certain new and useful Improvements in Watches; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Figure 1 is a top-plan view. Fig. 2 is a top-plan view with parts A and C removed. Fig. 3 is an enlarged section through the center of the barrel. Fig. 4 is a top-plan view of plate A.

The present improvement relates to the construction of the top plate, and in the arrangement and combination therewith of the barrel or case containing the mainspring, in such a manner that when occasion requires, as for repairing or cleaning the mainspring barrel and arbor, can be readily removed from the watch without taking off the top plate or disturbing the other parts of the watch, and also in turn be readily replaced; and it consists more particularly in cutting a slot from the outer edge of the top plate to the hole or aperture in which the arbor or spindle revolves, and in so attaching to said arbor or spindle a bush or plate, that the said arbor can be secured thereby in its proper position in and to the top plate of the watch; or, on releasing said bush or plate from its seat or position, said spindle or arbor can be readily removed from the watch, together with the barrel containing the main spring, all as will now be more fully and specifically set forth and explained.

In the accompanying drawing, A represents the top plate of the watch, which is attached to and connected with the back plate B in the usual manner. C is the mainspring-barrel. D is the spindle or arbor; D' the enlarged portion thereof, to which one end of the mainspring is attached. These parts may be of the ordinary construction. The top plate is countersunk at A' in a little degree, while at A'', which, in a horizontal line, is within A', there is a still deeper countersink. The object of the former—that is, A'—is to allow the

heads of the screws *a*, which are used to secure and hold the bush or plate *d* of the spindle D upon and to the top plate A, to come below the upper face of said plate; but, obviously, this end can be accomplished in any ordinary and well-known way. The object of the countersink at A'' is to furnish a seat or rest for the bush *d*, the upper edge of which is provided with a suitable rabbet or shoulder for this purpose.

When, now, the several parts are adjusted in proper relation to each other, and said bush secured in position by means of said screws *a*, which, fitting into holes in the top plate in said countersink A', are placed so near the edge of countersink A'' that their heads bind upon and fasten down the said bush, the said spindle or arbor is in the ordinary position for use in the watch, and is securely held and fastened.

In order to detach the mainspring-barrel from the watch, the top plate A has a slot, E, extending from its outer edge as far as the said countersink A'', through which, vertically and centrally, in a suitable opening, the arbor passes. This slot is made of such size and shape as to allow the passage of said arbor through it on occasion of the removal of the barrel and spring. To accomplish this end it is only necessary to take out the screws *a*, remove the bushing *d*, and, by any convenient tool, or by the fingers, withdraw the several parts. The slot E forms a pathway and guide for the purpose. If needs be, the back plate may also be grooved or countersunk at B', to make more easy the way for the removal of the barrel. This operation of removal can be performed without any difficulty, and likewise the several parts can again, in turn, be readily replaced.

The essential gain and advantage from this improvement are, that it enables the workman to detach the parts and get at the mainspring without delay or loss of time, and without disturbing in any manner the other works of the watch. This is of no small advantage when it is considered how much time and patience are required in taking apart and putting together the several pieces of the watch, as watches are now made.

Having thus fully set out and described my

said invention, what I desire to secure and protect by Letters Patent is—

1. The top plate, having a slot or pathway for the removal of the barrel-arbor, extending from the outer edge of said plate to the opening through which said arbor passes vertically, substantially as set forth.

2. The spindle or arbor D, with its bushing *d*, combined with the top plate A, having slot E, substantially in the manner and for the purposes set forth.

3. The combination of plate A, countersunk,

as described, with spindle D, bush *d*, screws *a*, mainspring-barrel C, and back plate B, substantially as and for the purposes herein described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

FERD. ADOLF LANGE.

Witnesses:

CARL EDUARD MAUCKSCH,  
GUSTAV GUTKAES.