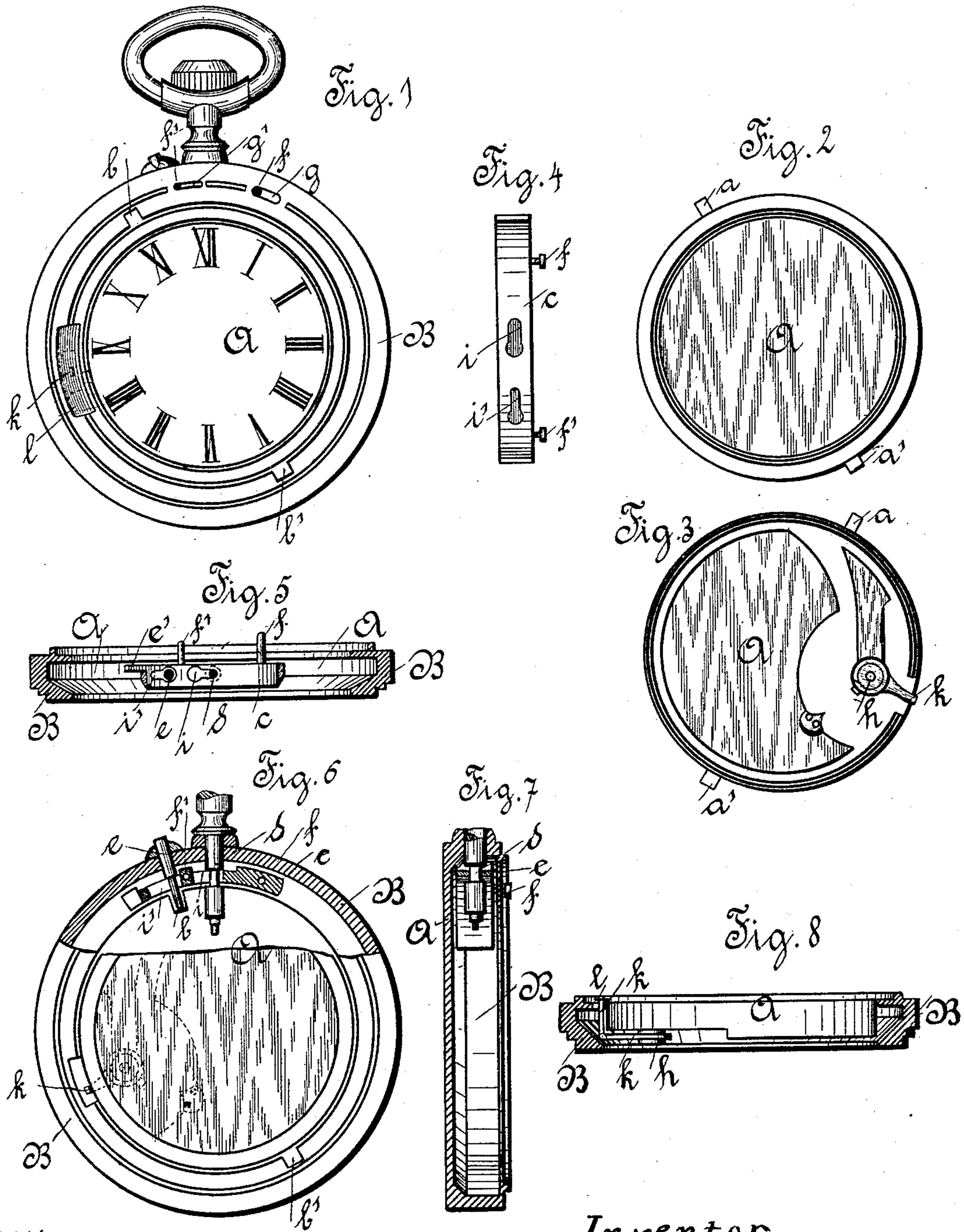


(No Model.)

J. DÜRRSTEIN.
WATCHCASE.

No. 521,210.

Patented June 12, 1894.



Witnesses
Thomas Dinant
Wallace Mendenhall

Inventor
Johannes Dürrestein
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UNITED STATES PATENT OFFICE.

JOHANNES DÜRRSTEIN, OF DRESDEN, GERMANY.

WATCHCASE.

SPECIFICATION forming part of Letters Patent No. 521,210, dated June 12, 1894.

Application filed February 2, 1893. Serial No. 460,797. (No model.)

To all whom it may concern:

Be it known that I, JOHANNES DÜRRSTEIN, a subject of the King of Saxony, residing at Dresden, Saxony, German Empire, have invented certain new and useful Improvements in Watches, of which the following is a specification.

The object of my invention is an improvement in watches which allows the case to be formed as flat as possible so that its looks lighter and more pleasing, furthermore the back cover can be dispensed with whereby the works are better protected against dust. For this purpose the movement is not fastened to the case from the back as usual but is kept by a locking device fastened to the rim of the watch and capable of being operated from the front. Furthermore an arrangement is made for regulating the tension of the hair spring likewise from the front. By this arrangement the screws by which the movement is usually fastened to the case are dispensed with in consequence of which the work can be released and taken out of the case by drawing a sliding bolt from the front of the case and without the employment of a tool.

In the accompanying drawings Figure 1 is a front view of the watch the cover being removed. Fig. 2 is a front view of the movement; Fig. 3 a back view of the same showing the spring regulating device. Fig. 4 is the sliding bolt. Fig. 5 is a cross section of the case with the sliding bolt. Fig. 6 is a view of a watch partly in section. Fig. 7 is a vertical sectional view. Fig. 8 is a sectional view showing the regulating device of the hair spring acted upon from the front.

If the new sliding bolt device is employed the case screws which often fail and are little reliable in consequence of the weakness of the surrounding parts can be dispensed with. The movement is provided with two pins or projections *a a'* which match with two corresponding grooves *b b'* of the rim B. The latter is provided with a friction held sliding bolt *c* the tongue *c'* of which covers one of said pins *a* so that the plate A is fastened within the case and prevented from dropping out. This bolt lock may be placed where required. Besides these pins *a a'* the winding pin *d* and the hand setting pin *e* can be used for fastening the movement A within the case B as

most clearly shown in Figs. 6 and 7. For this purpose the sliding bolt *c* is provided with two slots *i i'* which are narrower at one end than at the other so that the sliding bolt acts like a locking ring. The sliding bolt *c* is provided with two pins *f f'* by which it can be moved to release or to fasten the work as the case may be; these pins are guided in slots *g g'* provided in the rim of the case. When the sliding bolt *c* is moved forward and locks the movement within the case these pins are kept in this position by being inclosed in cavities which are provided in the cover rim. The cover being closed the pins and therefore the sliding bolt are prevented from shifting and the works cannot be loosened. Both the winding stem *d* and the pin *e* are provided with grooves *i. e.* are reduced in the middle so that they are so thin at this part that they fit the narrow part of the slots *i i'* of the sliding bolt, their larger parts just being able to pass through the larger parts of said slots. If it is required to remove the works A from the case B the sliding bolt *c* is drawn backward after which the winding stem *d* and hand setting pin *e* may be withdrawn through the slots *i i'* of the sliding bolt *c*.

As above described there are three ways of fastening the movement within the case: First, the movement is retained only by its pins *a a'* and sliding bolt *c* within the case B; second, the movement is retained by the winding stem *d* and the hand setting pin *e* in combination with the slotted sliding bolt *c*, or, third, the movement is retained by both the arrangements just mentioned.

For the purpose of dispensing with the back cover and flattening the case removal of the device for regulating the tension of the hair spring will be necessary in combination with the new methods for fastening the movement within the case. This device is accessible only from the back on watches now in use. For this purpose an angularly bent pin *k* is fastened to the part *h* by which the tension of the hair spring can be regulated as shown in Figs. 3 and 8, this pin passes through a recess made in the rim of the case and leading from the back to the front of the case; it carries on its top end a plate *l* that covers this recess so that no dust can enter.

I claim—

1. In a watch, the combination with the case having cut out portions, of the movement provided with the projections adapted to register with the cut out portions in the case, 5 and the locking bolt for locking the parts together; substantially as described.

2. In a watch, the combination with the case having the cut out portions, of the movement provided with the projections to register with 10 said cut out portions and the sliding bolt within the rim of the case adapted to cover one of said projections to lock the parts; substantially as described.

3. In a watch, the combination with the case 15 and the movement fitted therein, of the sliding bolt within said case having the slots

wider at one end than the other, and provided with the pins, extending through slots in the rim, for moving the bolt, and the winding stem and set pin, reduced at their middle 20 portion whereby when the bolt is moved forward the narrow portion of the slots will prevent the withdrawal of the pins and stem, but when moved backward the parts can be withdrawn substantially as set forth and described. 25

In testimony thereof I have hereunto set my hand in the presence of two witnesses.

JOHANNES DÜRRSTEIN.

Witnesses:

RUD. SCHMIDT.

HERNANDO DE SOTO.