

F. FITT.
Watch Going Barrel.

No. 202,012.

Patented April 2, 1878.

Fig. 1.

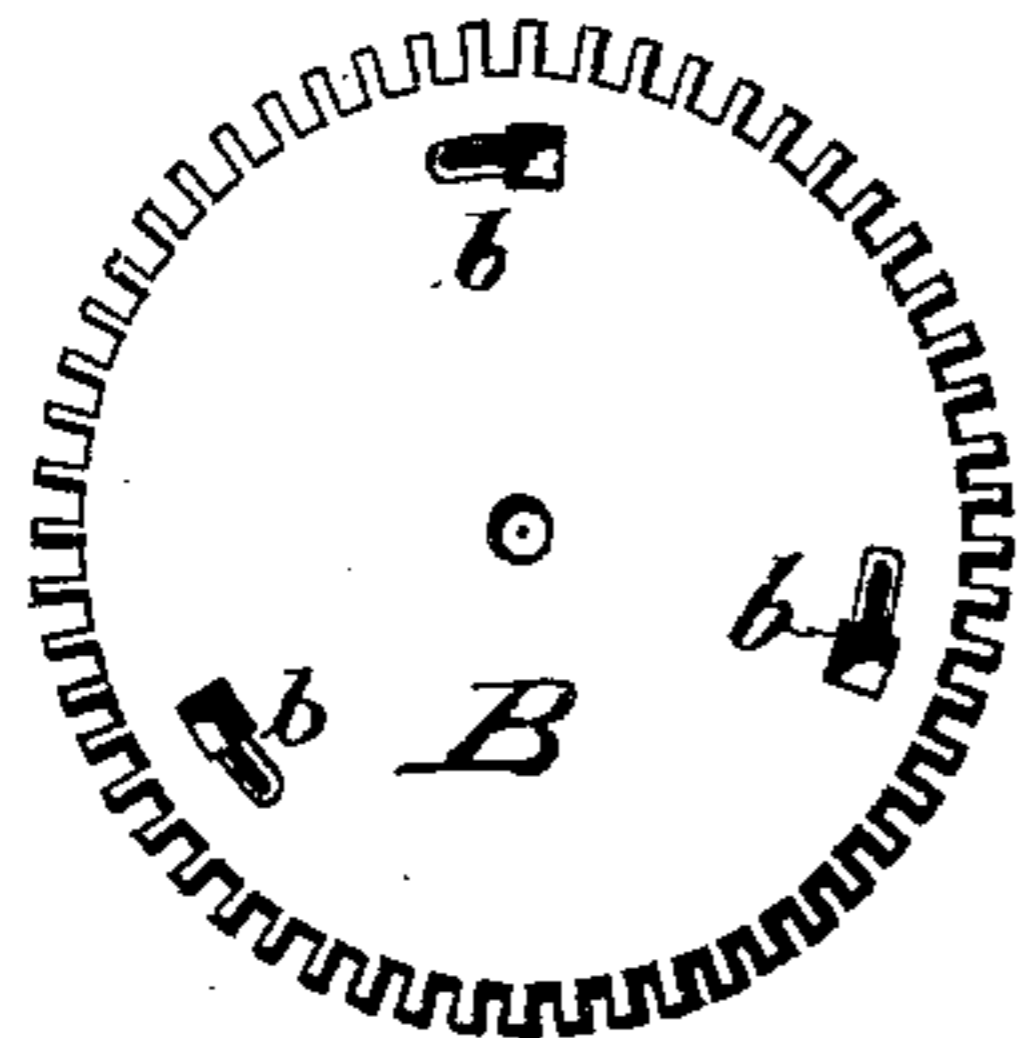


Fig. 2.

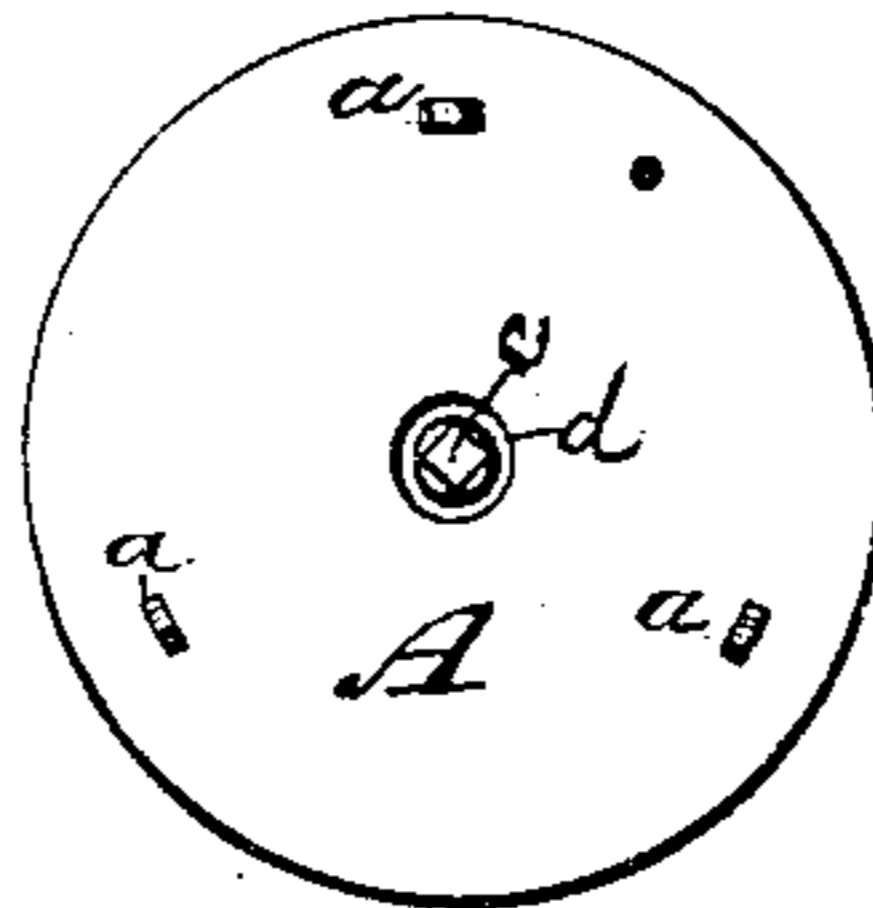


Fig. 3.

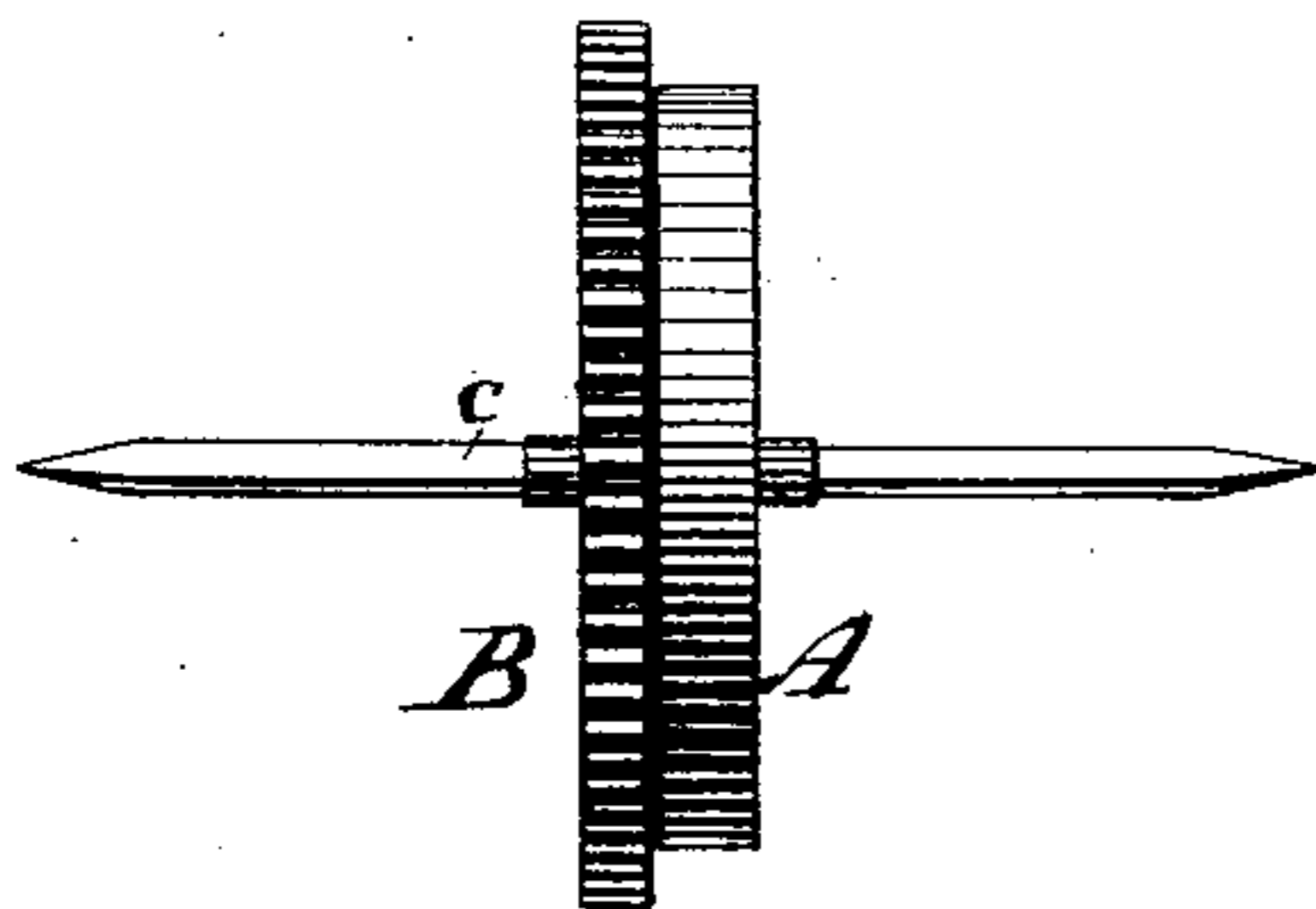


Fig. 4.

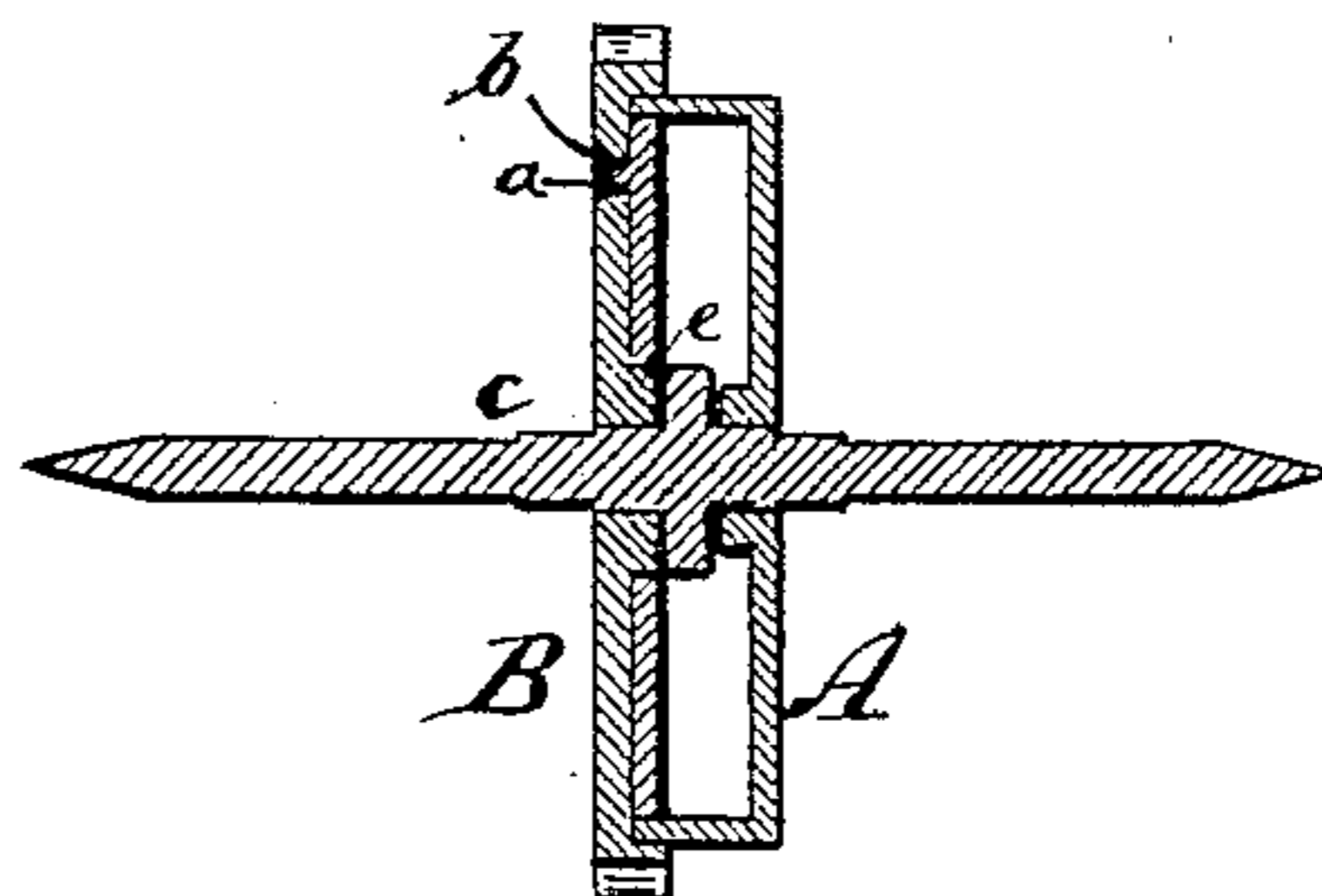


Fig. 5.

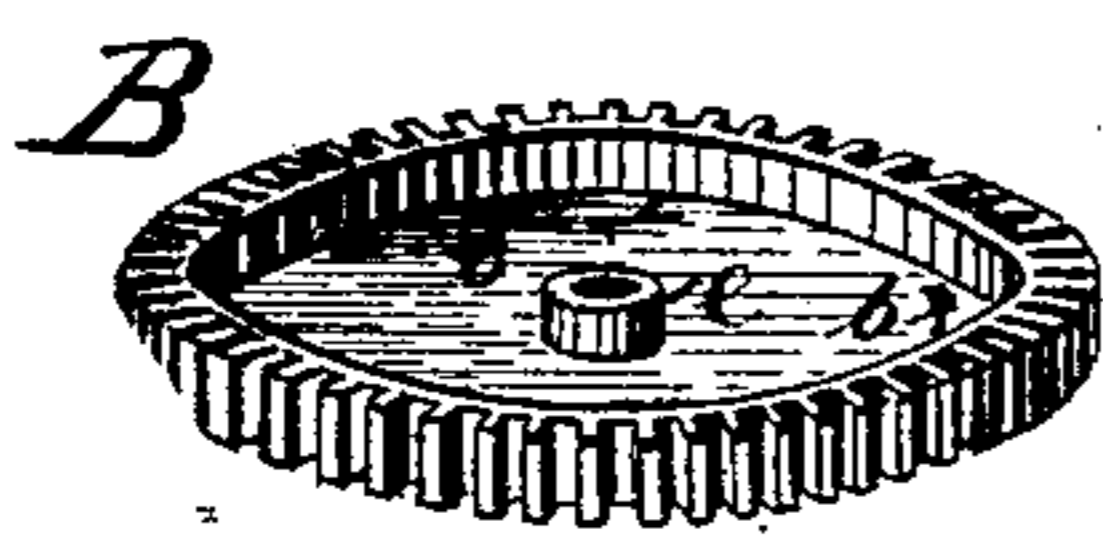
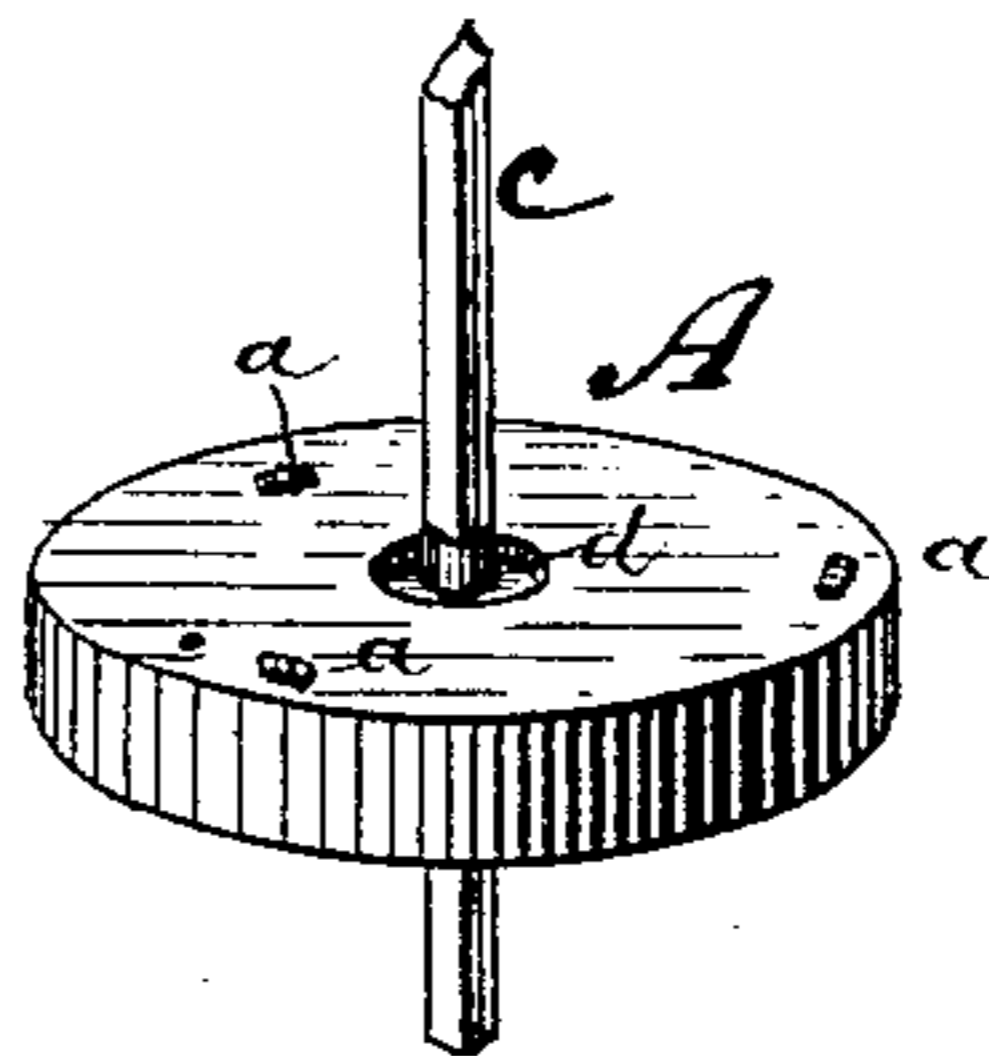


Fig. 6.



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UNITED STATES PATENT OFFICE.

FREDERIC FITT, OF OTTAWA, ONTARIO, CANADA.

IMPROVEMENT IN WATCH GOING-BARRELS.

Specification forming part of Letters Patent No. **202,012**, dated April 2, 1878; application filed November 23, 1877.

To all whom it may concern:

Be it known that I, FREDERIC FITT, of Ottawa, in the Province of Ontario and Dominion of Canada, have invented a new and useful Improvement in Watch Going-Barrels; and I do hereby declare that the following is a clear and exact description of my invention, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, in which—

Figure 1 is a face view of the great wheel. Fig. 2 is a similar view of the barrel with the great wheel detached therefrom. Fig. 3 is a side elevation of the barrel attached to the great wheel. Fig. 4 is a diametrical sectional view of the barrel and great wheel. Fig. 5 is a perspective view of the inner side or face of the great wheel, and Fig. 6 is a perspective view of the barrel.

Similar letters of reference indicate corresponding parts in all the figures.

My invention relates to that class of so-called "safety watch going-barrels" in which the barrel containing the mainspring does, by the breakage of this spring, become detached from the great wheel, thereby avoiding injury to this or to the other parts of the works; and it consists in the combination of a closed cylindrical barrel containing the spring with a detachable flanged great wheel fitting over the cylindrical closed barrel, substantially as hereinafter more fully described, and pointed out in the claims.

In the drawing, A is the spring-barrel, which is cylindrical in shape, and closed on both sides by heads or face-plates, so that the spring is completely inclosed within the barrel. Upon one of these face-plates are secured three or more dogs or catches, denoted by *a a a*, the ends of which are spread or widened, so as to dovetail with or slide in and out of corresponding slots or openings *b b b* in the face of the great wheel B. The dogs *a* are so bent and fitted into the openings *b*, which receive them, as to allow free back action or recoil of the barrel-case A, which has, on that head or side which faces and is inserted into the great wheel, a central

annular recess or depression, *d*, through the center of which passes the spring-arbor *e*, and which fits around a central raised boss or hub, *e*, on the inner face of the great wheel B. The dogs *a* rise only about one-sixth the thickness of the edge of the great wheel from their face-plate, so as not to project through, but only into, the beveled openings *b*, so that in case of recoil the displacement of the barrel and of the great wheel is very slight.

The central boss *e* is of such a height that it will allow the great wheel to rise sufficiently on its pinion to throw the dogs *a* out of gear, and thus it will be seen that the recess *d* in the barrel, into which this hub or boss is inserted, serves as a guide to enable the great wheel to rise vertically on its pinion in the contingency of breakage of the spring without tilting to either side, which might result in injury to the delicate mechanism which surrounds the great wheel, and is operated by it.

The rim of the cylinder A fits into the annular perpendicular flange of the great wheel, as shown in Fig. 4, inside of which rim or flange the perforations *b b b* are placed.

Similarly, the corresponding dogs or catches *a a a* are not placed upon the periphery or rim of the barrel A, but upon the face-plate of this inside of the rim.

I have found by experiment that a barrel-rim provided with dogs which engage with the superimposed great wheel is insufficient, without a head covering and retaining the spring within the barrel, to withstand the constant and powerful strain of the spring, and especially under the recoil caused by breakage, when the spring, not covered and confined by a barrel-head, will twist and tilt the great wheel whichever way the spring, on its sudden and powerful recoil, may drag it.

I do not claim, broadly, the combination of a watch going-barrel provided with dogs or catches with a flanged detachable great wheel having beveled perforations for the insertion of these dogs or catches; but,

Having thus described my improvement, I claim and desire to secure by Letters Patent of the United States—

1. A closed watch going-barrel, A, pro-

vided with dogs or catches *a a a* on its face-plate inside of its rim or periphery, substantially as and for the purpose herein shown and specified.

2. The combination of the closed watch going-barrel A, having dogs *a a a* and central annular recess *d*, with the flanged great wheel B, having beveled perforations *b b b*

and central raised cylindrical boss *e*, substantially as and for the purpose herein shown and described.

FREDERIC FITT.

Witnesses:

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J. COURSVILLE.