(No Model.)

F. SEDGWICK.

MAINSPRING FOR WATCHES.

No. 381,176. Patented Apr. 17, 1888.

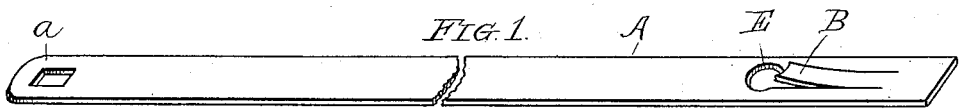

FIG. 1.

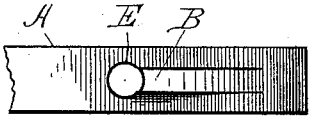

FIG. 2.

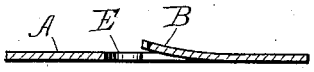

FIG. 3.

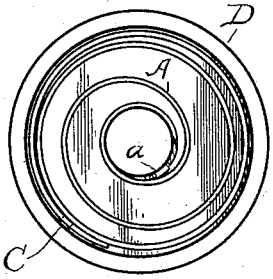

FIG. 4.

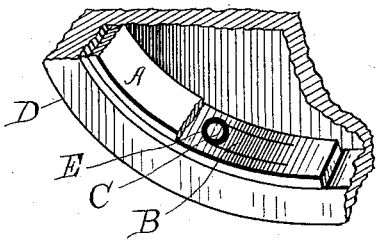

FIG. 6.

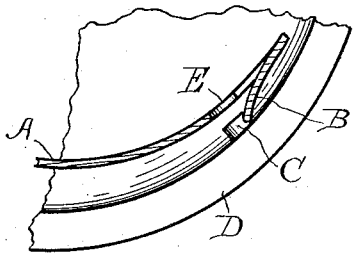

FIG. 7.

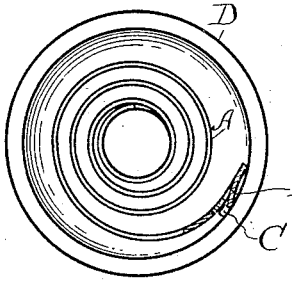

FIG. 5.

Witnesses:
J. B. Halpenny.
David Strang.

Inventor:
Frederick Sedgwick.
By Gridley & Fletcher
his Attys.

UNITED STATES PATENT OFFICE.

FREDERICK SEDGWICK, OF CHICAGO, ILLINOIS.

MAINSPRING FOR WATCHES.

SPECIFICATION forming part of Letters Patent No. 381,176, dated April 17, 1888.

Application filed December 2, 1887. Serial No. 256,740. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK SEDGWICK, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Watch-Mainsprings, of which the following is a description, reference being had to the accompanying drawings, forming a part of this specification, in which like letters of reference indicate like parts in the different figures.

Heretofore there have been two ways of constructing watch-mainsprings for the purpose of attaching them to the stud upon the inner wall of the cylinder or "barrel" in which the spring is placed. The first and most common is to perforate the end of the spring and hook it upon the stud; but this construction is subject to the objection that upon winding the spring, and thus varying the angle of its line of draft upon the stud, the spring is liable to slip off. To obviate this difficulty, another method of constructing the spring was adopted, which consisted in forming a reverse or backwardly-extended tongue or barb upon the spring and causing its end to engage with the stud. While this was effective in retaining its engagement with the stud, it produced a new difficulty, which was that the end of the stud projecting against the body of the spring prevented it from conforming to the circular shape of the barrel, and hence from assuming a regular coil. This, in turn, was found to be injurious in its effect upon the time-keeping qualities of the watches in which such springs were used.

The object of my invention is to overcome these difficulties, and to so construct the outer end of the spring that it may at all times retain its engagement with the stud, and at the same time permit the spring to conform to the shape of the barrel when wholly or partially unwound, all of which is hereinafter more particularly described, claimed, and shown in the drawings, in which—

Figure 1 is an enlarged perspective view in detail of the respective ends of an unbent watch-mainspring. Fig. 2 is a face view of the outer end, or that upon which the "brace" is formed. Fig. 3 is a central longitudinal sectional view of the same. Fig. 4 is a face view of a watch-barrel, showing an unwound spring therein. Fig. 5 is a like view of a watch-barrel, showing the position of the spring when wound. Fig. 6 is an enlarged detail view in perspective of a portion of said barrel and spring, to illustrate the manner in which the spring conforms to the shape of the barrel; and Fig. 7 is a face view in detail of a portion of the barrel, showing the position assumed by the end of the spring when wound.

In the drawings, A represents a watch-mainspring, of which *a*, Fig. 1, indicates the peforated end which is intended to be attached to the post, while B is a tongue, stamped by means of a die from the opposite end of the spring to engage with the stud C, rigidly attached to and projecting inwardly from the wall of the barrel D. At the end of said tongue B, I form a perforation, E, sufficiently large to receive the post or stud C. When the spring is inserted within the barrel, the tongue B is caused to engage with the post C, which, projecting through the perforation E, permits the outer coil of the spring to lie closely against the inner wall of the barrel and the next coil to lie flatly upon the first, when the spring is unwound, as clearly indicated in Figs. 4 and 6, thereby permitting the spring to coil and uncoil in a natural manner and with a minimum of friction.

As above suggested, I am aware that it is old to form a tongue like or similar, *per se*, to the tongue B upon the outer end of a watch-mainspring, and hence I do not claim, broadly, such construction; but as the tongue B, in combination with the perforation E, produces a new, useful, and improved result not heretofore accomplished—viz., the even coiling of the spring, together with a continuous engagement with the stud—

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

1. As an improved article of manufacture, a watch-mainspring provided with a backwardly-projecting tongue upon its outer end, and a perforation, as E, through said spring at the free end of said tongue of sufficient size to freely receive the usual stud of a winding-barrel when the end of said tongue is in engagement with said stud and the spring is

partially or wholly unwound, substantially as shown and described.

2. The combination, with a watch-mainspring, of the tongue B, perforation E, a winding-barrel, and stud C, whereby when the stud is placed in the barrel said tongue may engage with and said perforation may lie opposite to or receive said stud, substantially as shown and described.

FREDERICK SEDGWICK.

Witnesses:
D. H. FLETCHER,
J. B. HALPENNY.