

J. P. ADAMS.

Hair-Spring Studs for Watches.

No. 140,231.

Patented June 24, 1873.

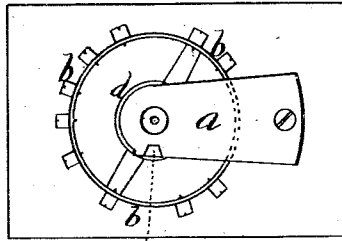


Fig. 1.

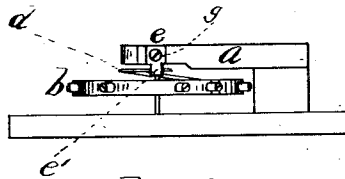


Fig. 2.

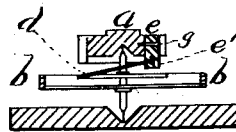


Fig. 3.

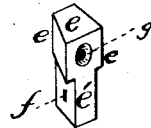


Fig. 4.

WITNESSES

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JOHN P. ADAMS. OF IPSWICH, MASSACHUSETTS.

IMPROVEMENT IN HAIR-SPRING STUDS FOR WATCHES.

Specification forming part of Letters Patent No. 140,221, dated June 21, 1873; application filed April 28, 1873.

To all whom it may concern:

Be it known that I, JOHN P. ADAMS, of Ipswich, in the county of Essex and State of Massachusetts, have invented a new and Improved Hair-Spring Stud, of which the following is a specification:

There has always been more or less difficulty experienced by watchmakers and repairers of watches in manipulating the hair-spring; owing to the difficulty of putting the spring into place without injury; also, by adjusters of fine watches in constructing a hair-spring stud which can be removed as many times as desired, and always replaced into its exact former position.

I have endeavored, in this invention, to obviate this difficulty, and have produced a hair-spring stud which combines the following requisites: First, my stud is light, thus preventing injury to the hair-spring in cleaning; second, it is easily and cheaply made; third, it can be removed and replaced precisely as originally intended; fourth, it will enter into its place automatically. This last has been the great desideratum, and is the most important advantage of my invention.

The nature of my invention is fully described below.

In the accompanying drawings, Figure 1 is a plan view of the bridge, balance-wheel, hair-spring, &c., of a watch, embodying my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a transverse section. Fig. 4 is a detached view of the hair-spring stud.

Similar letters of reference indicate corresponding parts.

a is the bridge. *b* is the balance-wheel. *d* is the hair-spring. *e* is my hair-spring stud.

It is formed in the shape of a truncated wedge, and is placed in the side of the bridge, secured therein by the screw *g*. *e'* is the lower portion of the stud *e*, to which the hair-spring attaches, being fastened thereto by the pin in the opening *f*, in the usual manner.

I regard the shape of my stud as eminently fitted to my purpose, which is mainly to cause the stud to enter into its exact former place automatically after being removed, no adjusting whatever being required.

It will be noticed that the upper side of the stud is quadrangular, not triangular. It presses against the bridge upon three sides.

I maintain that a stud held by the ordinary screw is more easily restored to its exact former position, both laterally and perpendicularly, than one held by a set-screw, hence I have placed my stud at the edge of the bridge, and passed a screw through it into the bridge.

My stud may be so made that its upper side may be nearly or quite rectangular, if desired.

Having thus fully described my invention, I do not claim a cone-shaped or triangular stud; but

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

The combination and arrangement, with the bridge in a watch-movement, of the hair-spring stud *e*, constructed of the shape hereinbefore described, and its upper surface being quadrangular in shape, and said stud *e* being attached to the side of the bridge by a screw, *g*, passing through the stud into the bridge.

JOHN P. ADAMS.

Witnesses:

HENRY W. WILLIAMS,
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