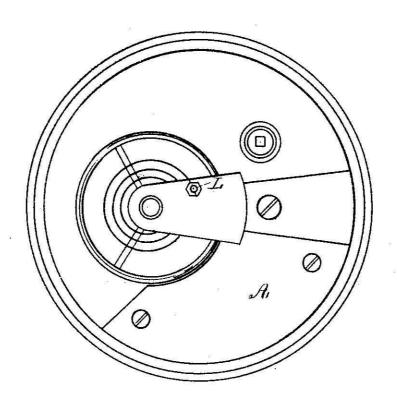
## E. RIVETT. Hair-Spring Stud for Watches.

No. 224,227.

Patented Feb. 3, 1880.



FIE-I.

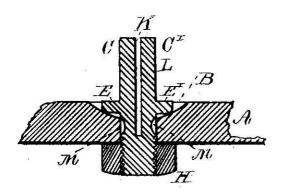


Fig. 2.

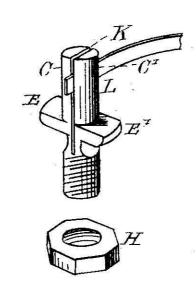


Fig.5.

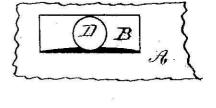


Fig.5 Fig. 4.

WITHESSES

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EDWARD RIVETT, OF BOSTON, MASSACHUSETTS.

## HAIR-SPRING STUD FOR WATCHES.

SPECIFICATION forming part of Letters Patent No. 224,227, dated February 3, 1880.

Application filed December 11, 1879.

To all whom it may concern:

spring.

Be it known that I, EDWARD RIVETT, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Hair-Spring Stud, of which the following is a specification.

The nature of my invention consists in combining with hair-spring stud, which has a kerf extending from its upper end nearly to the lower end, projecting arms which bear on one side of the plate, the bearing-points being near their outer ends. To hold this stud in place, its lower end extends entirely through the plate, and is held by a screw-nut. As the outer ends of the projecting arms rest on the plate, any considerable force exerted by the screw-nut to draw the stud down will cause the arms to incline upward, and thus throw that half of the stud to which they are attached in toward the other half—that is, the kerf will close up and securely grasp the hair-

In the drawings, Figure 1 is a plan of a watch-plate. Fig. 2 is a vertical section, show25 ing the stud and a part of the plate. Fig. 3 is a plan, showing the recess in the plate. Fig. 4 is a plan of the stud. Fig. 5 is a perspective view of the stud and its screw-nut.

Let A represent the watch-plate, which is provided with a rectangular sinkage, B, Figs. 2 and 3, and has a hole, D, in the center of this sinkage, which extends entirely through the plate.

The hair-spring stud L, Figs. 1, 2, 4, and 5, 35 is made as shown in the drawings, having a kerf, K, extending nearly through its length, and two projecting arms, E E', Figs. 2, 4, and 5. These projecting arms E E' are so made,

in connection with the recess in the plate, that their outer ends only bear upon the plate.

H is a screw-nut, which is attached to the lower end of the stud and serves to hold it firmly in place.

To give more elasticity to the sides C C' of the stud, I file away a portion of the metal at 45 the points M M, as shown in Fig. 2, immediately under the arms E E'.

My hair-spring stud operates as follows: It is inserted in the plate, as shown in Fig. 2, and the screw-nut H is turned onto it, but not 50 sufficiently to bring any strain upon the arms E E'. Now the hair-spring is inserted in the kerf K, and the nut H is turned on more firmly, so as to draw the stud down. This action will have a tendency to force the ends of 55 the arms E E' upward, which action will cause the parts C and C' to incline toward each other, and thus close up the kerf and firmly grasp the hair-spring.

The recess B in the plate A (see Fig. 3) re- 60 ceives the projections E E', and thus prevents the stud from turning.

I claim—

1. In a clock or watch, the kerfed stud L, having the projecting arms E E' and screw-65 nut H, operating together substantially as described, and for the purpose set forth.

2. In a clock or watch, the kerfed stud L, having projecting arms E E', in combination with the recessed plate A B, substantially as 70 described, and for the purpose set forth.

## EDWARD RIVETT.

Witnesses:

FRANK G. PARKER, ERNEST N. BOYDEN.