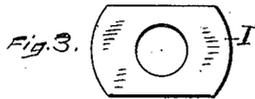
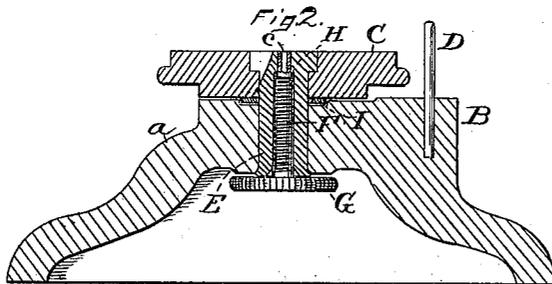
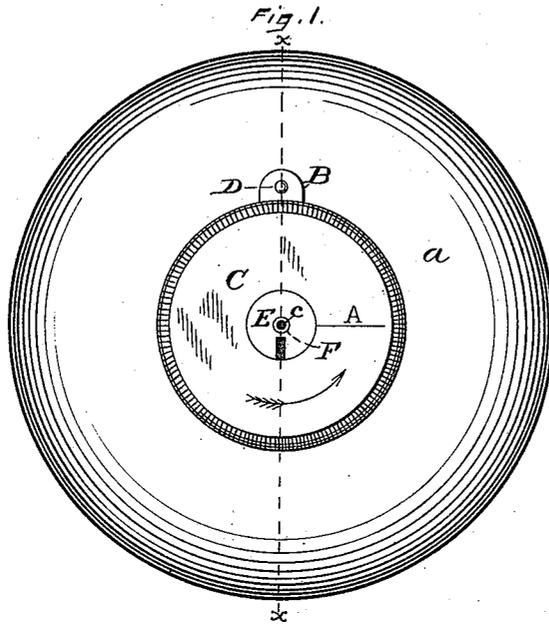


(No Model.)

C. TESKE.
HAIR SPRING STUD INDEX.

No. 356,179.

Patented Jan. 18, 1887.



Witnesses,
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Inventor,
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By James Shepard

Att'y.

UNITED STATES PATENT OFFICE.

CHARLES TESKE, OF WINDSOR, CONNECTICUT.

HAIR-SPRING-STUD INDEX.

SPECIFICATION forming part of Letters Patent No. 356,179, dated January 18, 1887.

Application filed May 1, 1886. Serial No. 200,809. (No model.)

To all whom it may concern:

Be it known that I, CHARLES TESKE, a citizen of the United States, residing at Windsor, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Hair-Spring-Stud Indexes, of which the following is a specification.

My invention relates to an improvement in hair-spring-stud indexes; and the object of my invention is to provide a tool to enable watch-makers to secure the hair-spring of any watch, so as to beat with accuracy, whether a lever, cylinder, duplex, or chronometer escapement movement.

In the accompanying drawings the figures are all drawn on an enlarged scale, in order the more clearly to show my improvement.

Figure 1 is a plan view of my hair-spring-stud index. Fig. 2 is a vertical section of the same on line *xx* of Fig. 1, and Figs. 3 and 4 are top and side views of the bearing-spring.

Hair-spring-stud indexes have heretofore been made with a revolving disk mounted on a standard or base-plate and having a single radial line on its upper surface, said disk being held in place by a drilled and slotted central plug provided with a shoulder at its upper end and riveted to the base-plate at its lower end. This form of hair-spring-stud index is adapted to only one class of watches, known as the "lever-escapement," whereas my improvement is adapted to all watches such as I have enumerated above.

In order to attain the object of my improvement, I have constructed the standard or base-plate *a* with a shoulder, *B*, projecting outward from the revolving disk *C*. This shoulder *B* is drilled to receive the index-pin *D*, which is firmly driven therein. The central plug, *E*, is drilled and tapped to receive the threaded pin *F*, which pin is controlled and operated by a circular flange, *G*. The upper end of the screw-pin *F* is formed with a shoulder, *H*, and the part above the shoulder is made to fit the hole in the central plug, *E*, and is likewise drilled with a smaller hole, *c*.

In adapting my improvement to a cylinder-escapement watch I withdraw the screw-pin *F*, so as to admit the lower end of the cylin-

der into the hole vacated by the pin. Then I place the banking-pin of the balance-wheel so as to come in line with the index-pin *D*, and then move the revolving disk *C* until the radial line *A* comes directly under the hair-spring stud.

In the case of a duplex or chronometer escapement I place the main impulse-pallet on line *A* of the revolving disk *C*, so that the hair-spring stud will align with the index-pin *D*.

In a lever-escapement I turn the screw-pin *F* up, so as to bring the upper end flush with the central plug, *E*; then move the balance in the direction indicated by the arrow, so that the table-roller jewel will touch the side of the eccentric slot in the direction it is moved, and then turn the revolving disk *C* until the radial line *A* is directly under the stud of the hair-spring.

In either of the above-mentioned cases the hair-spring can then be removed and all necessary repairs made on the balance or other parts connected therewith, and when the hair-spring is replaced the balance-wheel, with staff, &c., is placed in the center of the tool, as described, and the hair-spring stud placed on the radial line *A*, or in line with the index-pin *D*, and pressed onto the balance-staff, which in all cases will bring the parts of the watch so that the beat will be the same as in their original position.

In order to prevent the accidental moving of the revolving disk *C*, I have provided a bearing-spring, *I*, (see Figs. 2, 3, and 4,) which is slightly curved and drilled to pass over the central plug, *E*, between the revolving disk *C* and the standard or base-plate *a*, so as to bear against the said disk and prevent easy movement thereof.

I claim as my invention—

1. In a hair-spring-stud index, the base-plate *a*, having a shoulder, *B*, provided with an index-pin, *D*, in combination with the revolving disk *C*, having the radial line *A*, substantially as described, and for the purpose specified.

2. In a hair-spring-stud index, the drilled and threaded screw-pin *F*, formed with the shoulder *H* and flange *G*, in combination with

the central plug, E, base-plate *a*, and revolving disk C, substantially as described, and for the purpose specified.

3. In combination with a hair-spring-stud
5 index having a base-plate, *a*, revolving disk C, central plug, E, screw-pin F, and the spring I, adapted to bear against the revolving disk,

substantially as described, and for the purpose specified.

CHARLES TESKE.

Witnesses:

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