

W. HAINES.
Adjustable Watch-Key.

No. 202,344.

Patented April 16, 1878.

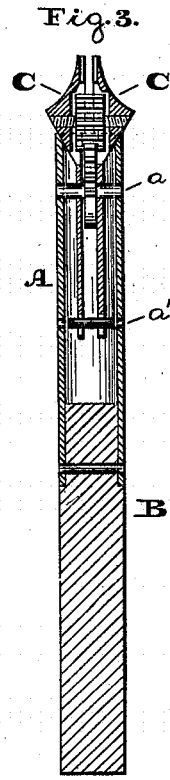
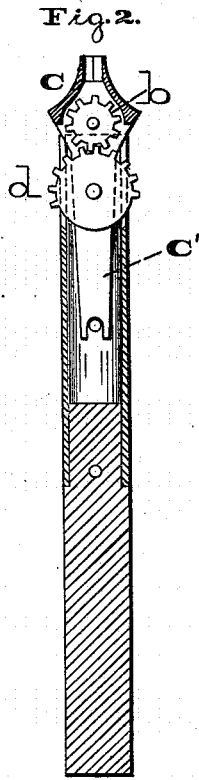


Fig. 4.

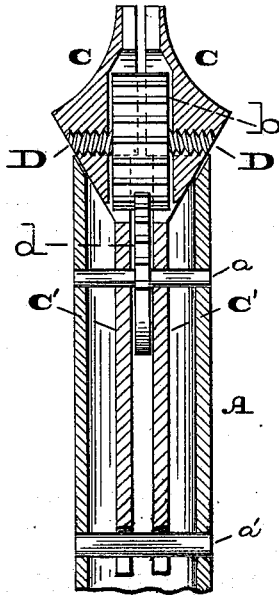


Fig. 5.

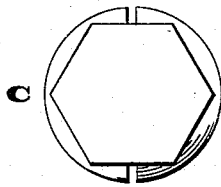
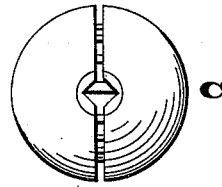


Fig. 6.



Witnesses:

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WILLIAM HAINES, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN ADJUSTABLE WATCH-KEYS.

Specification forming part of Letters Patent No. **202,344**, dated April 16, 1878; application filed January 31, 1878.

To all whom it may concern:

Be it known that I, WILLIAM HAINES, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Watch-Keys, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a side elevation of the key embodying my invention. Figs. 2 and 3 are central longitudinal sections in diametrically-opposite directions. Fig. 4 is an enlarged view of a portion of Fig. 3. Figs. 5 and 6 are views of opposite ends of the key.

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

My invention consists of adjustable jaws adapted to embrace the winding or setting post of a watch, and having parallel motions so as to take full hold of the post.

It also consists of mechanism imparting quick motions to the jaws with but little effort of the fingers.

Referring to the drawings, A represents a tube or tubular shank, to which may be attached a proper stem or handle, B. C represents two jaws, which are fitted to one end of the tube A, and each has a longitudinal extension, connection, or tongue, C', which enters the tube A, and those extensions are fitted loosely on transverse bars *a a'*, secured to the tube A.

The inner faces of the jaws C are chambered, and the space thereof receives a pinion, *b*, which is connected to a right and left threaded screw, D, fitted to the two jaws C, and with said pinion *b* meshes a larger pinion, *d*, which is mounted on the bar *a*, and has a portion of its periphery projecting through the tube A, so as to be readily accessible from the exterior of said tube.

It will be seen that by slightly rotating the pinion *d* in the proper direction, motion is imparted to the pinion *b*, and a consequent quick opening motion to the jaws. The key may now be applied to the post, after which rotate the pinion *d* in the other direction, the result whereof is a quick closing motion of the jaws on the post, which may then be turned as desired or required.

It will be noticed that a slight motion of the pinion *d* in either direction imparts quick motions to the jaws, and that the jaws move parallel in said motions, these parallel motions being occasioned by the transverse bars *a a'* and the operating-screw, which together act as guides for the jaws, whereby, when they close on the watch-post, they take firm, full, and uniform hold thereof, and there is no binding of the gearing, the advantages of which are evident.

It will also be noticed that the key is adjustable to posts of different sizes, and the gripe of the jaws may be increased by power properly exerted on the pinion *d*.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The jaws fitted to transverse bars and provided with an operating-screw, so as to have parallel motions, substantially as and for the purpose set forth.
2. The jaws C and tube A, in combination with the gearing *b d* and right-and-left screw D, substantially as and for the purpose set forth.

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