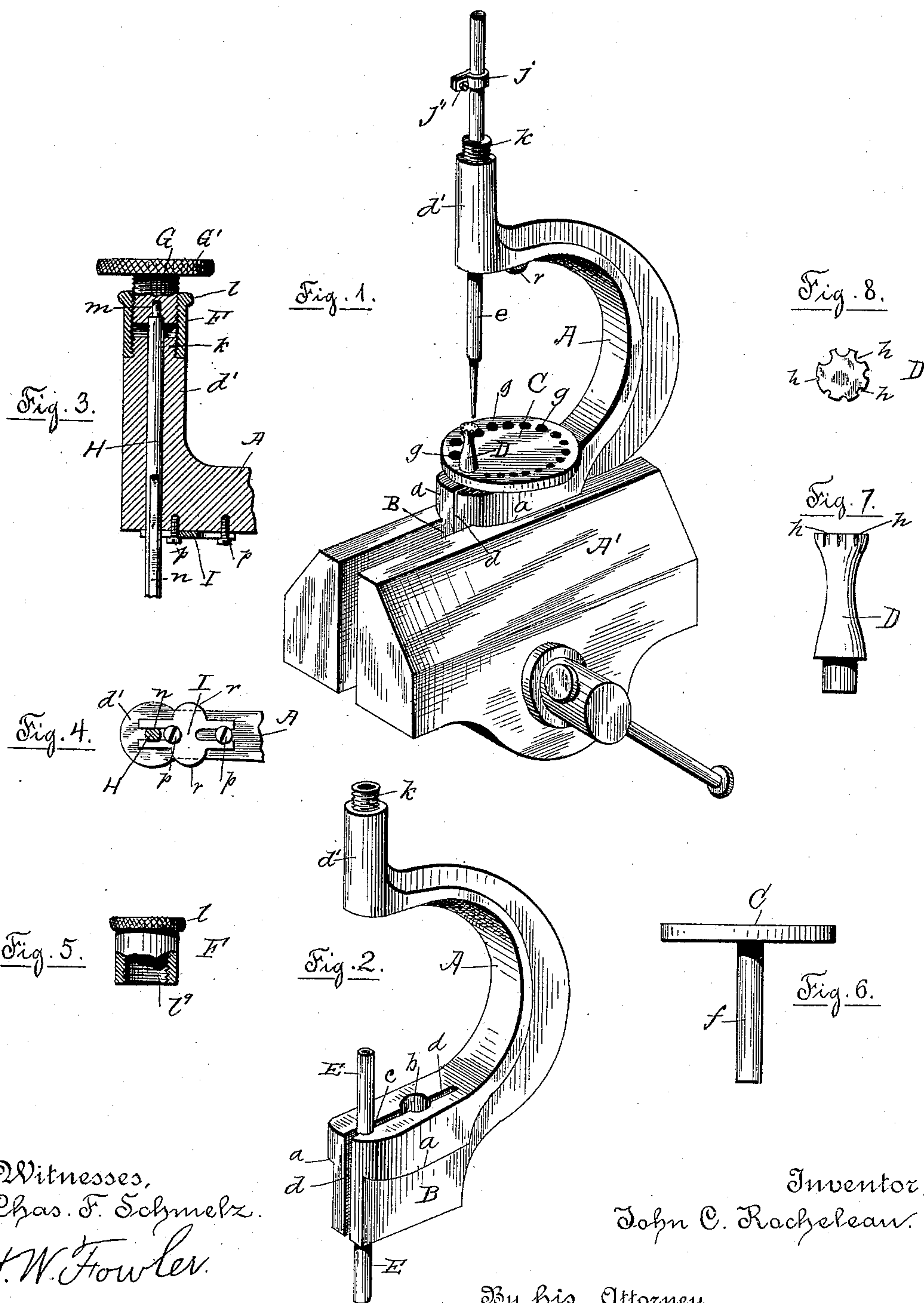


(No Model.)

J. C. ROCHELEAU.
WATCH MAKER'S STAKING TOOL.

No. 401,759.

Patented Apr. 23, 1889.



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WATCH-MAKER'S STAKING-TOOL.

SPECIFICATION forming part of Letters Patent No. 401,759, dated April 23, 1889.

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To all whom it may concern:

Be it known that I, JOHN C. ROCHELEAU, a citizen of the United States, and a resident of Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Watch-Makers' Tools, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of one of my improved punching and staking tools as held in a vise. Fig. 2 is a perspective view of the same removed from the vise. Fig. 3 is a sectional view of a portion of the supporting-stand, showing a screw-threaded sleeve attached to receive a screw-threaded plug for the purpose of forcing the punch. Fig. 4 represents a sliding plate by which the punch is held from rotating. Fig. 5 represents the screw-threaded sleeve, partly in sectional view. Fig. 6 shows the table in elevation. Fig. 7 is an elevation of the stump, which is shown as held in the table in Fig. 1; and Fig. 8 is an end view of the same.

Similar letters refer to similar parts in the several views.

My invention relates to an improved staking and punching tool for the use of watch-makers; and it consists in the several features hereinafter described, and specifically set forth in the claims.

In the accompanying drawings, A denotes the supporting-frame, so shaped at its lower end as to be securely held in a vise, as shown at B, Fig. 2, and provided with shoulders *a a* to rest upon the upper edges of the jaws of the vise. The lower end of the stand A is provided with the holes *b* and *c*, and also divided by a slot, *d*, passing through the center of the holes *b c*. The upper end of the stand has a tubular barrel, *d'*, which serves as a guide for the punches, one of which is shown at *e* in Fig. 1, the hole passing through the barrel *d'* being in alignment with the hole *c* in the lower end of the stand A. The rotating table C has a spindle, *f*, adapted to enter and turn in the hole *b* of the stand, allowing either one of the concentric rows of holes *g* in the table to be brought in alignment with the hole through the barrel *d'* and also with the hole *c* in the stand A.

In one of the holes in the table C, I place the stump D, with its upper end slightly flaring, so as to overhang the body of the stump, and around the edge I place a series of semi-circular openings, *h*, Fig. 8, varying in size, for the purpose of furnishing a support for breast-pins and similar articles in the operation of removing their pivotal pins.

Through the hole *c* in the lower end of the stand A, I place the hollow post E, vertically adjustable in the hole *c*, and either used with the table C removed or by passing the upper end of the post up through one of the holes in the table C. Whichever form of rest the character of the work may require is adjusted in suitable position and firmly secured by tightening the screw of the vise, thereby clamping the divided portions of the stand at B together and holding either the rotating table from turning or maintaining the hollow post E at its proper vertical height. The punch or other tool which is to be employed has a vertical sliding motion through the tubular barrel *d'*, to be struck with a hammer, as in the case of the tool shown in position in the stand in Fig. 1 of the drawings, where it is provided with an adjustable collar, *j*, open at one side and clamped on the tool by the clamping-screw, *j'*, in order to limit its motion when struck by the hammer. As in some kinds of work the tool employed in the stand requires to be forced upon the work by a continuous and steady pressure, I provide the upper end of the tubular barrel *d'* with an external screw-thread, *k*, upon which I place the sleeve F, having a milled rim, *l*, at its upper end and an internal screw-threaded cavity, 19, of uniform diameter throughout its entire length.

Within the projecting portion of the screw-threaded sleeve F, I place a screw-threaded plug, G, having a projecting milled head, G', and a central socket, *m*, to receive the upper end of the tool H, as shown in sectional view in Fig. 3. The tool H is slightly flattened at its sides, as at *n*, to allow the forked end of the sliding plate I to inclose the tool and prevent its rotation while in use. The sliding plate I is attached to the stand A by the two screws *p p*, upon which it slides, being moved by the operator through the milled wings *r r*, which project beyond the sides of the stand A.

In use, the suitable form of rest having been selected for the work to be done, the vise-screw is tightened to hold the rest in its position to receive and support the work. The tool to be used is then selected from the variety employed by watch-makers in this class of work. If a tool to be forced by a blow, as shown in Fig. 1, then the tip of the tool is placed upon the work and the collar *j* adjusted on the tool as high above the top of the barrel *d'* as it is desired that the tool should move; but if a tool as shown in Fig. 3, in which a steady pressure is required, the tool is placed in the barrel *d'* and the plug *G* applied to the end of the tool, which is forced upon the work by the rotation of the plug *G*.

In some kinds of work it is desirable that the tool should not rotate. In such cases I slide the plate *I* so that its forked end shall inclose the flattened sides *n* of the tool and prevent it from turning. In Figs. 1 and 2 the screw-threaded sleeve *F* is removed from the stand in order to show more clearly the screw-threaded portion of the barrel *d'*.

Staking-tools for watchmakers' use are now made in which the plunger is provided with a screw-thread, and punching-tools are also in use having a stand with a rest for the work and a barrel for a vertically-sliding tool to be operated by a percussive force. I claim none of these broadly; but

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

1. In a tool for watchmakers' use, the supporting-stand adapted to be held in a vise and having the end to be embraced by the jaws of the vise provided with a slot forming two

elastic portions at each side of the slot, substantially as described, and for the purpose specified.

2. In a tool for watchmakers' use, a supporting-stand for maintaining a rest for the work, a rest for the work, a barrel for a vertically-moving plunger, said barrel having an external screw-thread, a sleeve provided with an internal screw-thread, and a screw-threaded plug entering said sleeve and arranged to force the plunger downward in said barrel, substantially as described.

3. In a tool for watchmakers' use, having a supporting-stand and a vertically-moving plunger, the stump *D*, said stump being provided with a series of openings substantially semicircular in form, as and for the purpose set forth.

4. In a tool for watchmakers' use, the stand *A*, provided with a slot, *d*, and holes *b* and *c*, and a tubular barrel to receive a sliding plunger, substantially as described.

5. The combination of stand *A*, barrel *d'*, screw-threaded sleeve *F*, and plug *G*, having a socket, *m*, substantially as described.

6. The combination of the supporting-stand *A*, provided with rests for the work and a barrel, *d'*, screw-threaded sleeve *F*, and plug *G*, provided with a central socket, *m*, to receive a plunger or tool, *H*, said tool being flattened on its side, together with means by which the rotation of the tool is prevented, substantially as described.

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Witnesses:

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