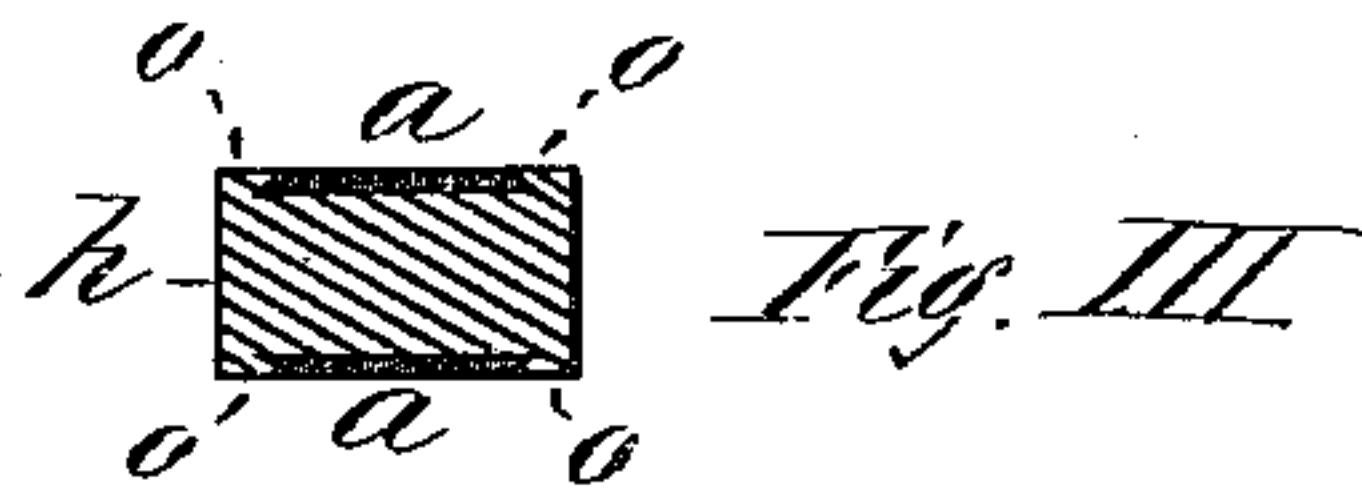
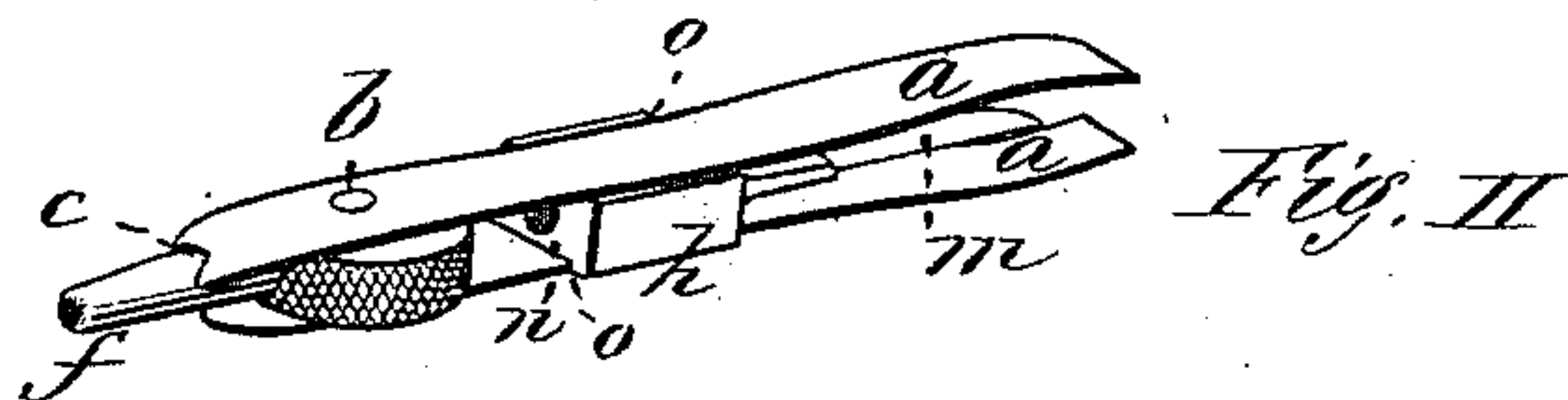
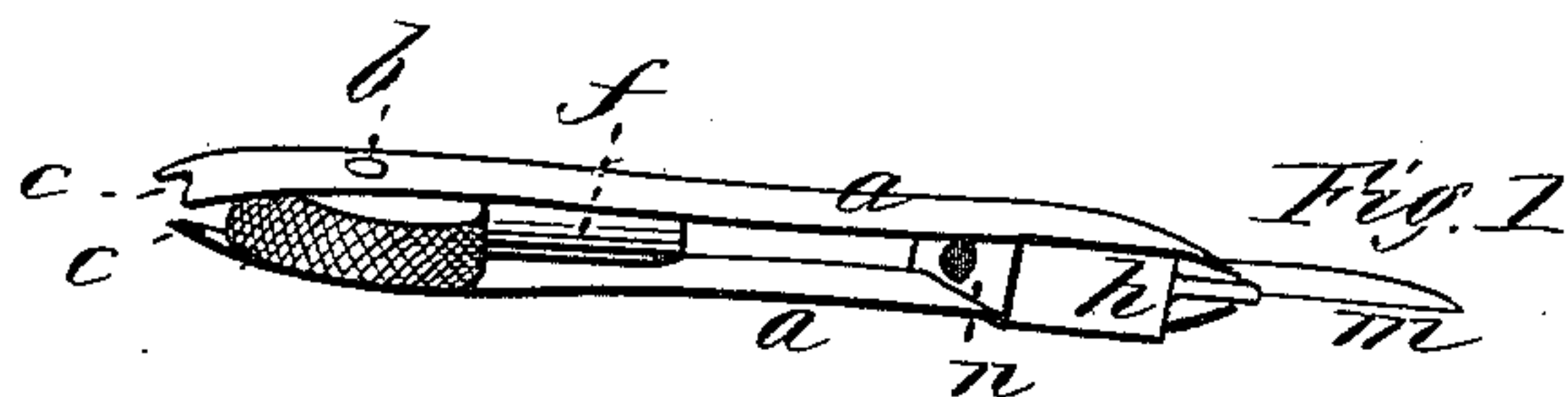


O. D. WARFIELD.

Watch-Key Combination-Tool.

No. 165,635.

Patented July 13 1875.



Witnesses.

C. E. Buckland,

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Inventor,

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UNITED STATES PATENT OFFICE.

OLIVER D. WARFIELD, OF CHICOPEE, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND GEORGE D. BARTLETT, OF SAME PLACE.

IMPROVEMENT IN WATCH-KEY COMBINATION TOOLS.

Specification forming part of Letters Patent No. 165,635, dated July 13, 1875; application filed May 19, 1875.

To all whom it may concern:

Be it known that I, OLIVER D. WARFIELD, of Chicopee, in the State of Massachusetts, have invented a new and useful Improved Knife and Tweezers; and that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing making a part of this specification and to the letters of reference marked thereon, in which—

Figure I is a perspective view of the invention, showing the slide pushed back and the blade drawn in; Fig. II is a perspective view, showing the blade and slide pushed out; and Fig. III is a transverse section of the slide and tweezer-bars.

The object of my invention is to furnish a combined tweezer and knife, with a stock pivoted therein, upon which is made a watch-key or a small punch at one end, and an ear-spoon upon the other, when the stock is pivoted in the middle, whereby either may be used without turning the tweezer-bars upon their pivot; and to this end my invention consists of a pair of tweezer-bars, made elastic, between which is fitted a slide, with flanges on each side, which grasp the edges of the bars, so that the latter will be firmly held in the same fixed relative position, and yet so that the slide may be moved to and fro on the bars. A knife-blade is attached to, or made upon, one end of the slide, so that when the latter is moved out the tweezer-bars form the handle of the knife, and when the slide is moved in the latter forms the fulcrum to keep the tweezer-bars apart. A pin is inserted through the bars, near the end, to hold them in place in connection with the slide, upon which pin is pivoted a short piece or stock, which may have a watch-key made at the end, or, if pivoted in the middle, may have a watch-key or small punch made on one end, and an ear-spoon on the other, the pivoted stock being suitable for any small instrument to be made thereon.

In the drawings, *a a* represent the two tweezer-bars, which are made somewhat sharp at each edge, and *h* represents a slide, having flanges at *o*, which project over and grasp the

edges of the bars *a*, and hold them always in the same relative position with each other, and yet, so that the slide may be moved along to and fro upon the bars. A knife-blade, *m*, is made upon one end of the slide, and a hold, *n*, may be made in the other end; and a pin, *b*, is inserted through both bars, *a*, near one end, upon which pin a short stock, *f*, is pivoted, so that said stock may be turned thereon. This stock may be pivoted about midway its length to the pin *b*, and a watch-key or a small punch may be made upon one end, and an ordinary ear-spoon on the other end, so that either may be used by rotating the stock half way around upon its pivot *b*. A notch, *c*, is made in the end of each bar *a*, and the ends bent toward each other, so that if the watch-key is to be used, if it is turned outward in line with the bars *a*, it snaps into the notches *c*, and is held firmly by them. When the watch-key or the punch is turned in again the slide *h* is moved back, so that the end of the stock *f*, having the key or the punch made thereon, enters a short distance into the hole, and dirt is prevented from entering the barrel of the key, or, if a punch is made thereon, the edge of the latter is protected from injury. The ends of the bars *a*, forming the tweezers, are curved into the usual form of those instruments, so that when the slide is moved in the ends are held apart, as shown in Fig. II; but when the slide is moved out, the ends are brought together by the flanges *o* of the slide, and the extreme ends of the bars *a* are brought against the heel of the knife-blade, and act as a support to hold the blade firm, while the bars serve as the handle.

Having thus described my invention, what I claim as new is—

The combination of the elastic-bars *a a*, the slide *h*, provided with flanges *o*, the knife-blade *m*, the pin *b*, and the pivoted stock *f*, all constructed and arranged substantially as herein described.

OLIVER D. WARFIELD.

Witnesses:

T. A. CURTIS,

C. EUGENE BUCKLAND.