(No Model.)

A. E. FRANCIS.

RING AND WATCH CASE ATTACHMENT FOR ENGRAVING MACHINES.

No. 297,981. Patented May 6, 1884.

Fig. 2.

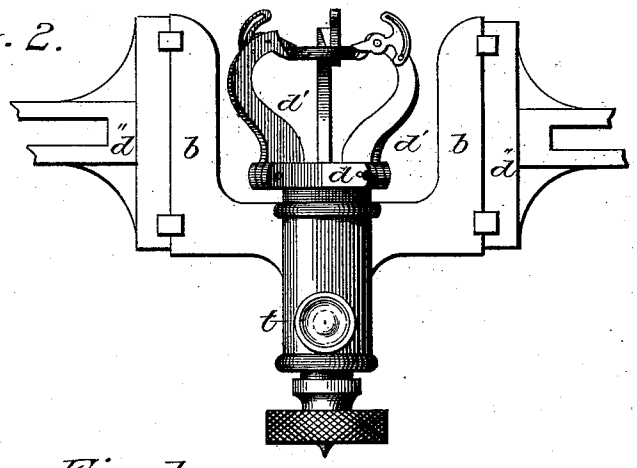


Fig. 1.

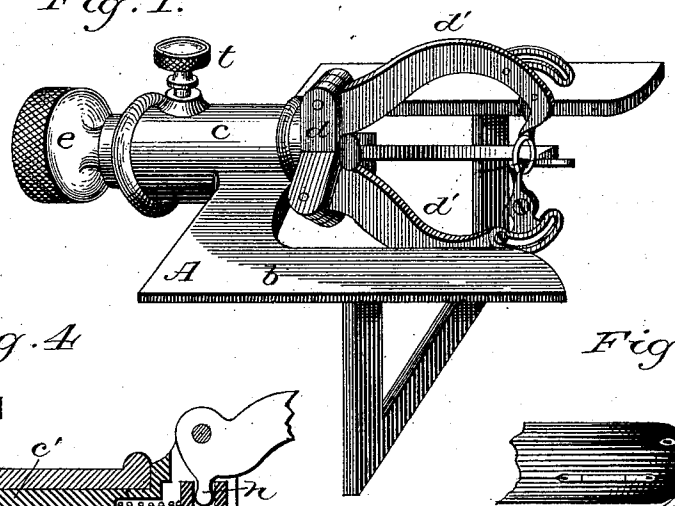


Fig. 4

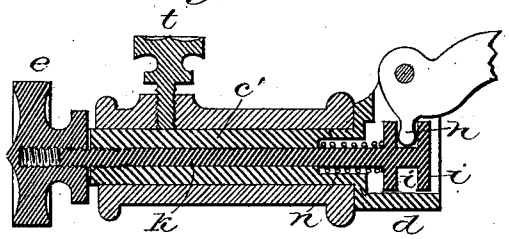


Fig. 5.

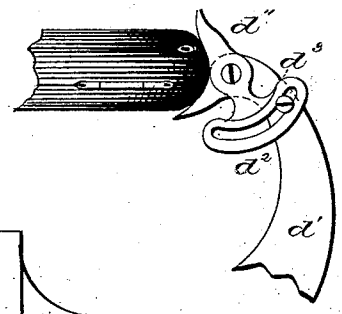
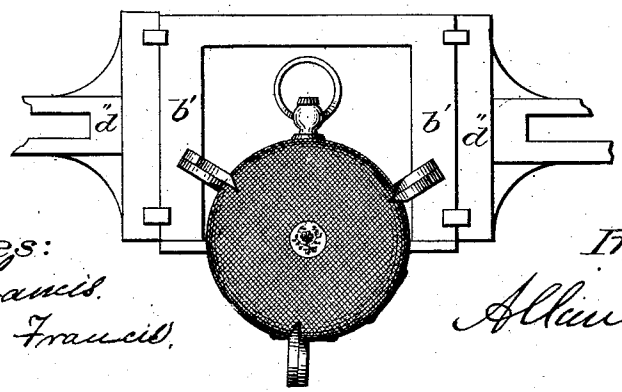


Fig. 3.



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UNITED STATES PATENT OFFICE.

ALLAN E. FRANCIS, OF CLEVELAND, OHIO.

RING AND WATCH-CASE ATTACHMENT FOR ENGRAVING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 297,981, dated May 6, 1884.

Application filed November 16, 1881. (No model.)

To all whom it may concern:

Be it known that I, ALLAN E. FRANCIS, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a new and useful Ring and Watch-Case Attachment for Engraving-Machines, of which the following is a specification.

My invention relates to engraving-machines, for certain improvements in which Letters Patent of the United States were granted and issued to me, bearing date of March 15, 1881, and numbered 238,882.

The object of my present invention is to enlarge the field of adaptability of said machine to articles for which it has been but poorly provided—viz., watch-cases and finger-rings. It is true that the above-named articles may be held in the machine by the metallic clamps, or by pieces of wood or metal attached thereto, conforming in shape to the article to be engraved; but when it is necessary to rotate the piece as each letter is engraved, the clamps must be opened, and the liability of deranging the line by difficulty of properly replacing it is evident. Much care and skill have been required and time and labor lost in so doing this class of work, for which there has previously been no remedy.

With this attachment watch-cases and finger-rings of all forms may be centered, securely held, rotated, and engraved without disturbing them in the jaws of the device, making it easy to preserve a line around the interior of a ring, or a circle on the inner or outer cap of a watch-case—a thing almost impossible to do with the machine alone.

This attachment is fully shown in perspective, holding a tiny finger-ring, in Figure 1. Fig. 2 is a plan view of the same as held in the clamps *d d* of engraving-machine, Patent No. 238,882. Fig. 3 is a plan view of the attachment as used for watch-cases, shown as held in the machine-clamps, with watch-case in position. Fig. 4 is a vertical section of body *c*, and parts operating the arms. Fig. 5 is an enlarged view of the jaws of one arm, shown in position on a watch-case.

This device consists of a casting, A, having a body, *c*, in which are placed the several parts operating the arms, and a frame, *b* and *b'*, by which it is clamped in the machine, either in a horizontal or vertical position, as required.

In the body *c* is placed a hollow shaft, *c'*, on one end of which is cast a suitable head, *d*, divided into six lugs, equally disposed around its center in pairs, with an intervening space between each pair the width of the thickness of arm *d'*, one of which is pivoted in each space, making three in all that project out into the frame. Each arm is provided with a lug, *h*, which is held between two flanges, *i i*, on the end of rod K, contained in the shaft *c'*, and provided with thumb-nut *e* at its outer end, by which the arms are governed, the opening of the same being effected by coiled spring *n*. The outer end of each arm is of the peculiar shape shown in Fig. 5, forming a jaw, its companion *d''* being pivoted to it and provided with a slide, d^2, and screw, d^3, by which it is adjusted to fit the particular article presented. It will be seen that by this arrangement the arms all work simultaneously, making a self-centering device, and that an article held in its jaws can be rotated at pleasure and secured when desired by the thumb-screw *t*. By being held in the machine either in a horizontal or vertical position, it affords a convenient attachment for many other articles than finger-rings and watch-cases—such as medals, bracelets, and pieces of similar form.

I claim—

1. In ring and watch-case attachments for engraving-machines, frame *b*, having body *c*, containing hollow shaft *c'*, provided with head *d*, carrying arms *d'*, and being operated by rod K, all made and combined substantially as and for the purposes herein described and set forth.

2. In ring and watch-case attachments for engraving-machines, the combination of arm *d* with jaw *d''*, having slide d^2 and screw d^3, made and arranged substantially as shown and described.

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