

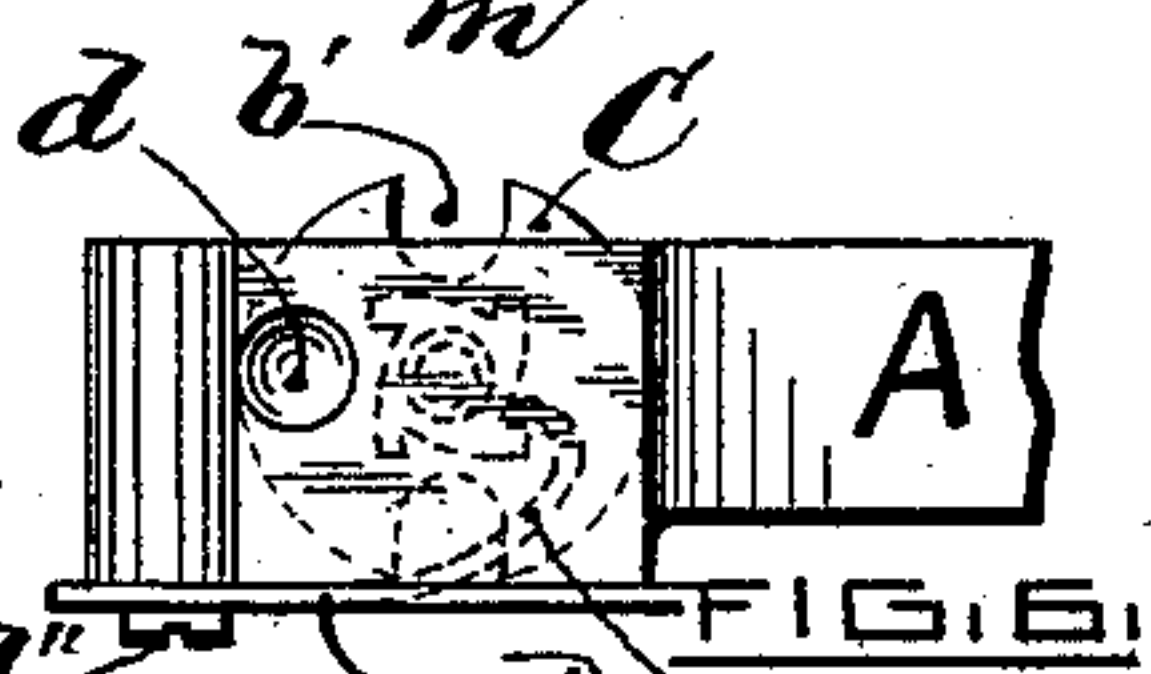
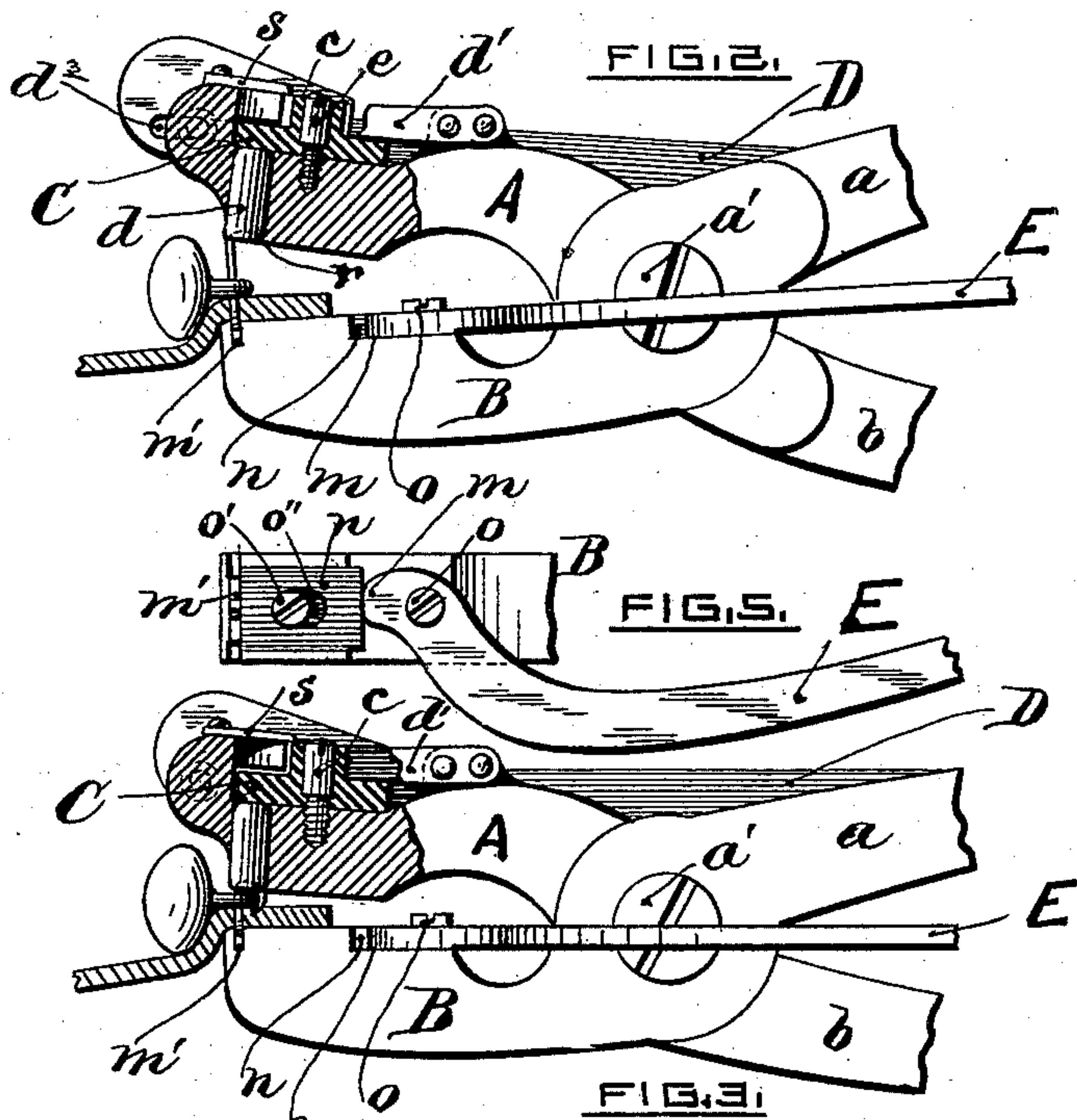
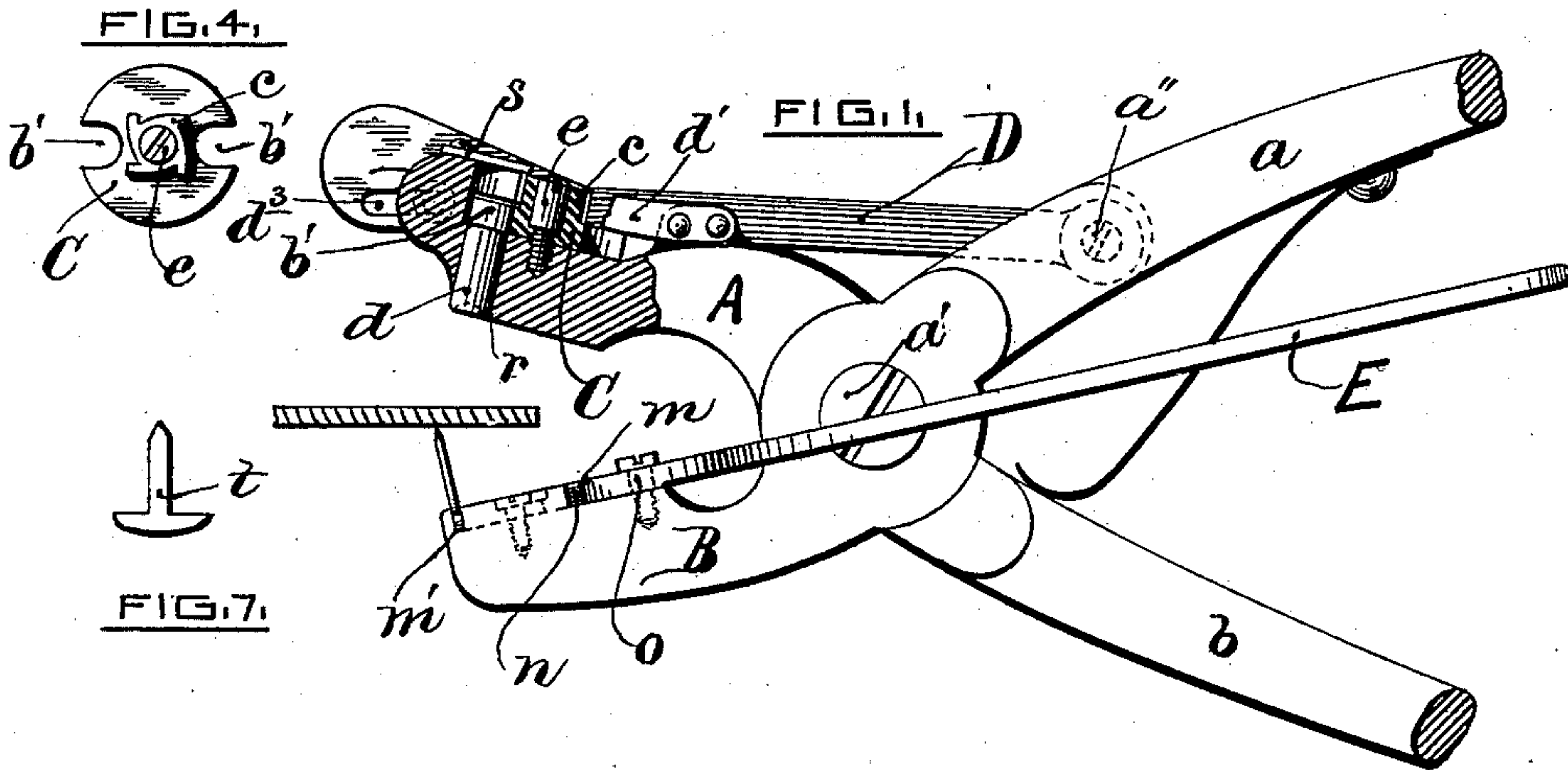
(No Model.)

J. F. THAYER.

BUTTON ATTACHING INSTRUMENT.

No. 296,890.

Patented Apr. 15, 1884.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JAMES F. THAYER, OF PROVIDENCE, RHODE ISLAND.

BUTTON-ATTACHING INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 296,890, dated April 15, 1884.

Application filed February 27, 1884. (No model.)

To all whom it may concern:

Be it known that I, JAMES F. THAYER, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Button-Attaching Instruments; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in that class of instruments which are designed for the purpose of attaching buttons to fabric by means of a one-prong metallic fastening; and it consists, essentially, of a device on one member so arranged and operated that a clinching mechanism and free opening shall alternately be presented to the point of a fastening, which is held firmly in the opposite member; also, the mechanism for holding said fastening, all as will be hereinafter more fully described. To illustrate my invention, I refer to the drawings, in which—

Figure 1 is a front elevation of the instrument complete, showing the upper jaw in partial section and fastener in position in lower jaw, ready for attachment. Fig. 2 is a similar view, showing rotary disk in position over the die-pin, with the fastener through the fabric and button-eye, ready for clinching. Fig. 3 is a view of the same, showing the button attached to the fabric, with fastener complete. Fig. 4 is a top view of rotary disk. Fig. 5 is a plan view of front portion of lower jaw, showing fastener-clamping device. Fig. 6 is an inverted plan view of upper jaw. Fig. 7 is a fastener adapted to be used in the instrument.

Referring to the drawings, it will be seen that the instrument is composed of the upper and lower jaws, A and B, operated by means of the handles *a* and *b* in a well-known manner. The upper jaw, A, is provided on its upper surface with a rotary disk, C, which is pivoted at *e* to the member A. This disk is provided on two opposite sides with recesses *b'*. On the upper surface is formed a ratchet-wheel, *c*, as shown in Fig. 4. This ratchet-wheel is operated by means of the connection D, which is

attached to the handle *a* at *a''*, back of the pivot *a'*, as shown in dotted lines in Fig. 1. The front end of the connection being attached to the jaw A at *d*², as shown in Fig. 6, this end of the connection is provided with a slot, *d*³, to allow a movement in the operation of attachment. The front end of the connection D is also provided with a spring-hook, *n*², as shown in dotted lines in Fig. 6, which operates on the ratchet-wheel *c*, to rotate the disk C. In front of the pivot *e*, in the jaw A, is an opening, *r*, into which a pin, *d*, is loosely fitted, the upper portion of the opening being provided with the cover *s*, which prevents the pin *d* from being removed from the jaw, the lower portion of the opening being chamfered to correspond with the end of the pin *d*, as shown. In the lower end of the pin is formed a concavity for clinching the prong of a fastening. The spring *d'* is secured to the member A, as shown, and acts on the side of the ratchet-wheel *c*, to assist in revolving it, also to retain it in position when the revolution is completed. The opposite jaw, B, is provided on its upper surface with a sliding plate, *n*, which is loosely secured to the jaw B by means of the screw *o'*, which allows the plate to move freely back and forth by the slot *o''*. In front of the plate *n* is a recess, *m'*, to receive the head of the fastener *t*. At the rear of the plate is a cam-lever, E, pivoted at *o*, the short arm *m* operating against the plate *n*, as fully shown in Fig. 5, the long arm extending toward the rear of the instrument.

The operation of attachment is as follows: The instrument is first opened, as shown in Fig. 1, with one of the recesses *b'* opposite the pin *d* in jaw A. The head of the fastener *t* is then placed in the recess *m'* of the jaw B. The long arm of the lever E is carried inward toward the handles *a b*, which forces the short arm *m* of the lever against the plate *n*, moving it against the fastener *t*, securely holding it in position, as shown in Fig. 1. By compressing the jaws, the fastener is forced through the fabric, the pin *d* moving upward until it reaches the cover *s*. The jaws are now opened wide, which causes the connection D to act on the ratchet-wheel *c* and revolves the disk C, bringing the solid portion over the pin *d*. The button is now placed on the fastener, as shown in Fig. 2. The jaws are again compressed, and the point of the fastener being forced against

the concavity in the end of the pin *d*, it is clinched around the eye of the button, the solid portion of the disk preventing the pin *d* from moving upward, as shown in Fig. 3. The jaws
5 are now opened wide, which again revolves the disk C, locating one of the recesses *b'* opposite the pin *d*, ready for another attachment. The long arm of the lever is then moved outward, which releases the fastener, when the button
10 will be found to be securely attached to the fabric.

I do not confine myself to the stated number of recesses in the rotary disk, as the number may be changed, if desired. Neither do I claim,
15 broadly, a disk provided with a ratchet operated by means of levers, as that was a subject-matter presented in my application filed February 15, 1884; but

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

1. In a button-attaching instrument, in combination with one member thereof, the prong-clinching mechanism, consisting of the pin *d*,

rotary disk C, spring *d'*, and the lever D, attached to the handle *a* back of the pivot *a'*, combined, arranged, and adapted for use, substantially as described. 25

2. In a button-attaching instrument, in combination with one member thereof, the herein-described fastener-clamping device, consisting
30 of the recess *m'*, plate *n*, and cam-lever E, combined, arranged, and adapted for use, substantially as described.

3. The herein-described button-attaching instrument, consisting of the member A, provided with pin *d*, rotary disk C, spring *d'*, and
35 connection D, and the member B, provided with recess *m'*, plate *n*, and cam-lever E, the whole combined, operated, and arranged substantially as shown and described. 40

In testimony whereof I affix my signature in the presence of two witnesses.

JAMES F. THAYER.

Witnesses:

F. A. SMITH, Jr.,
WM. R. DUTEMPLE.