

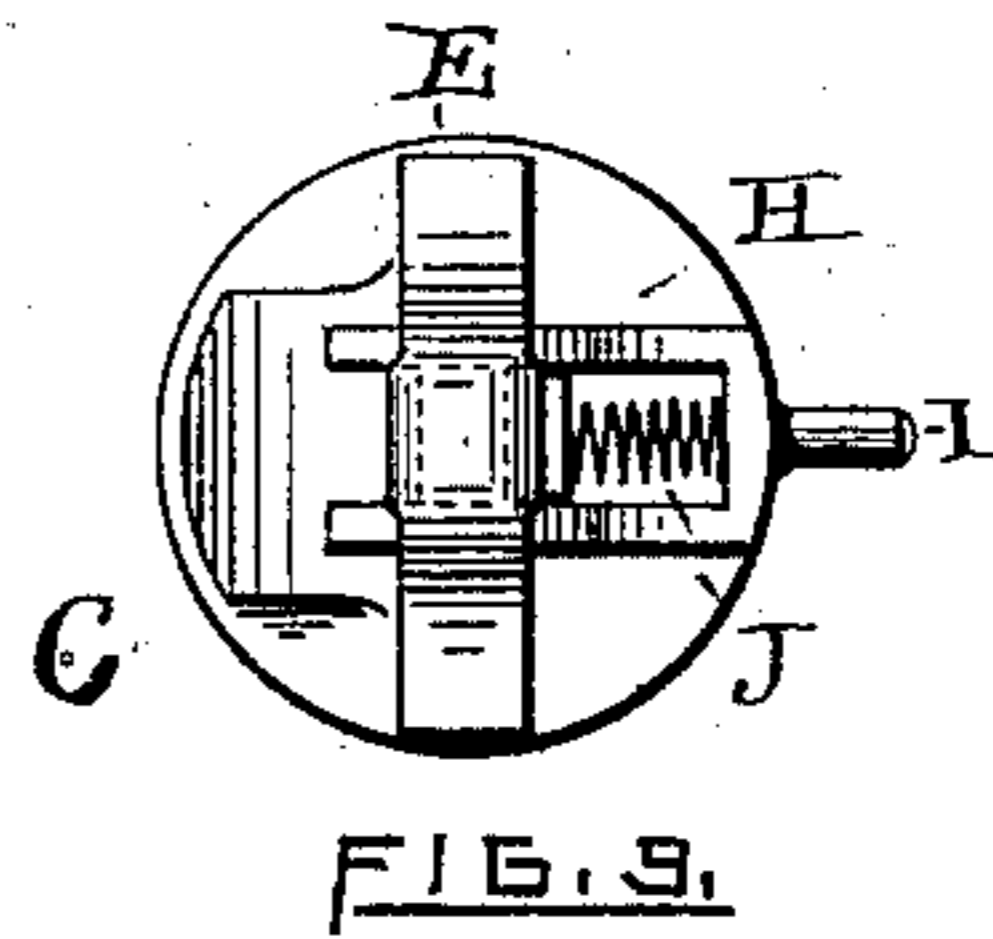
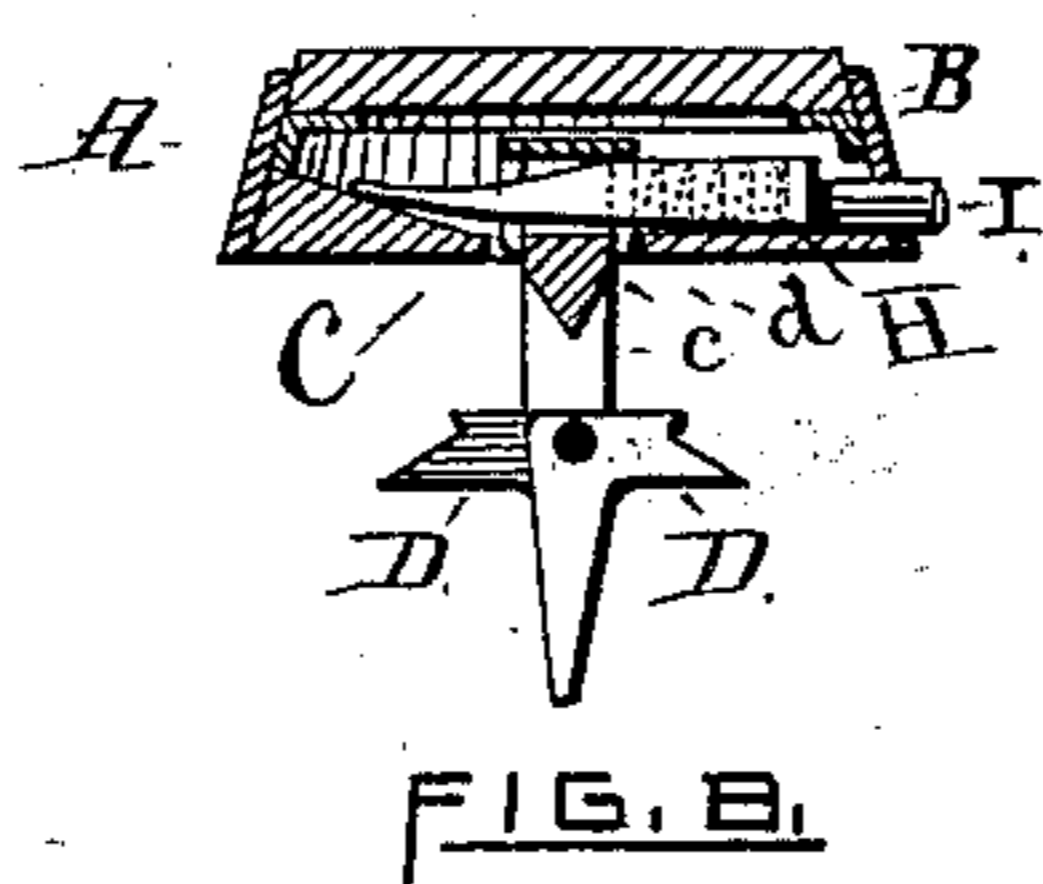
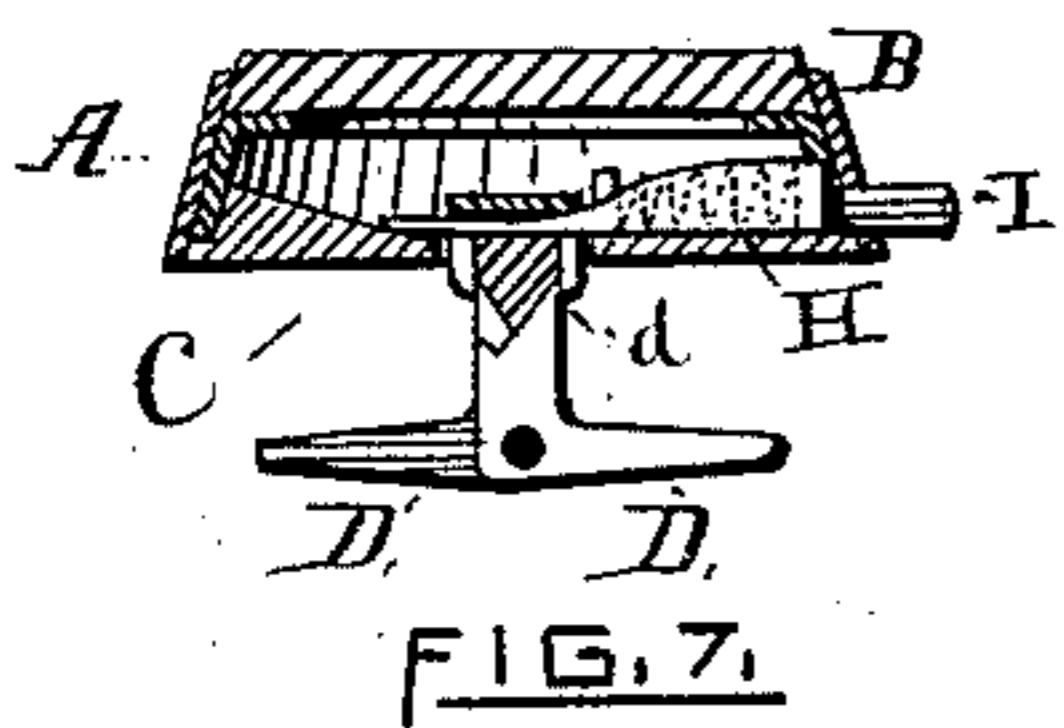
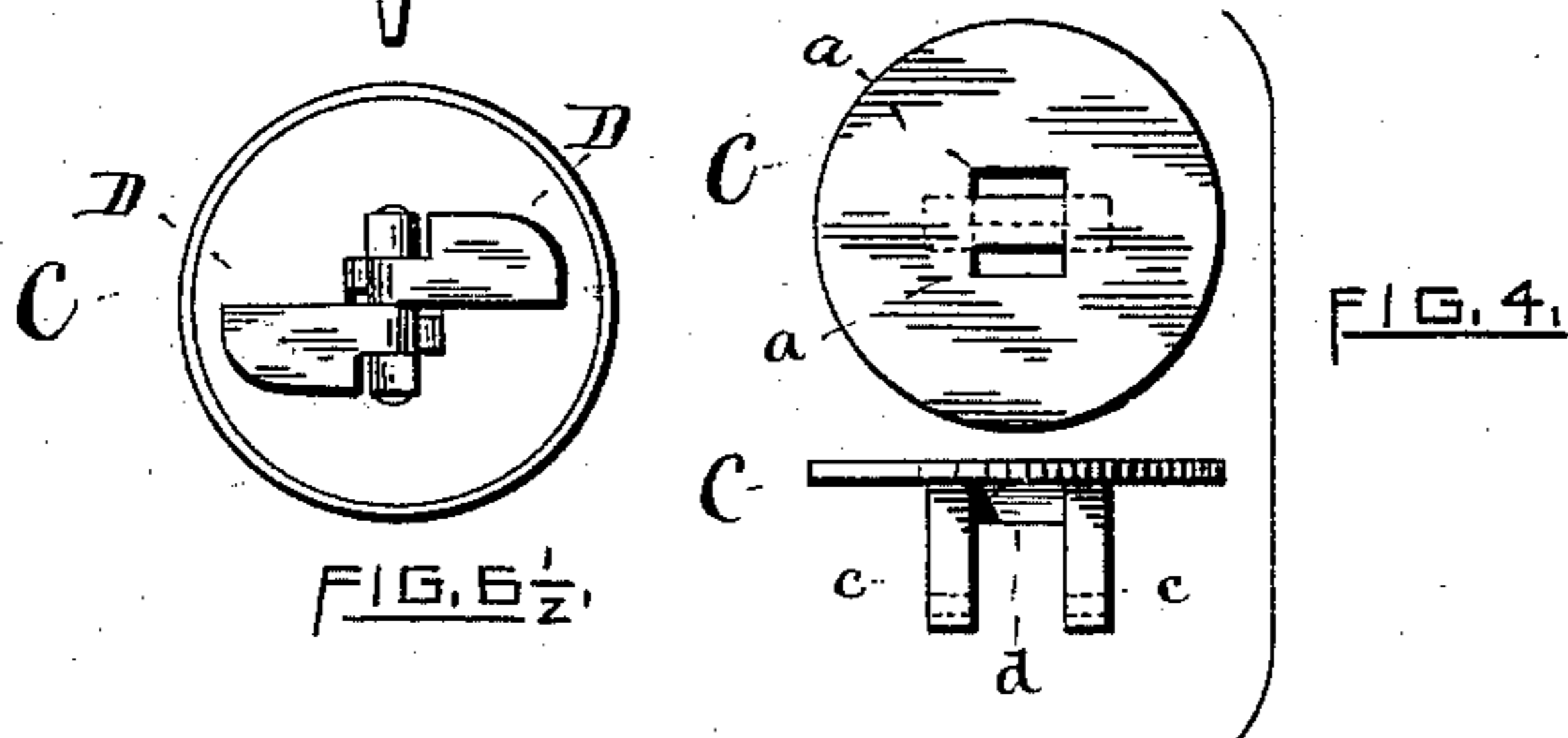
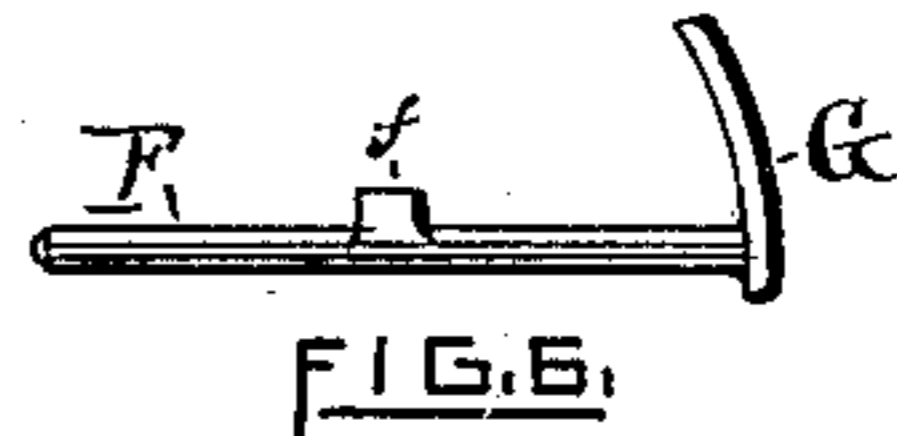
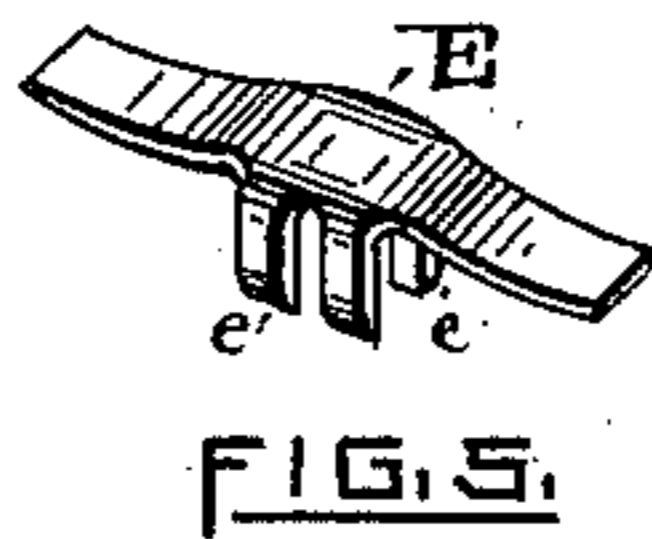
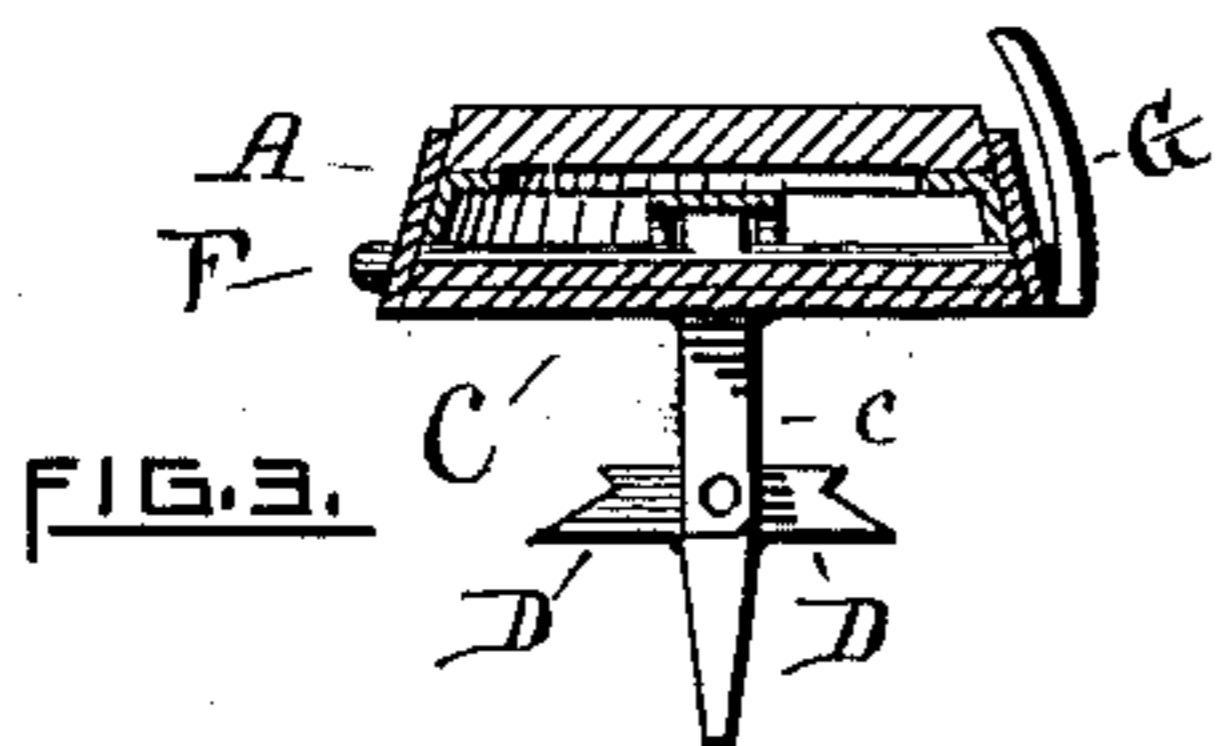
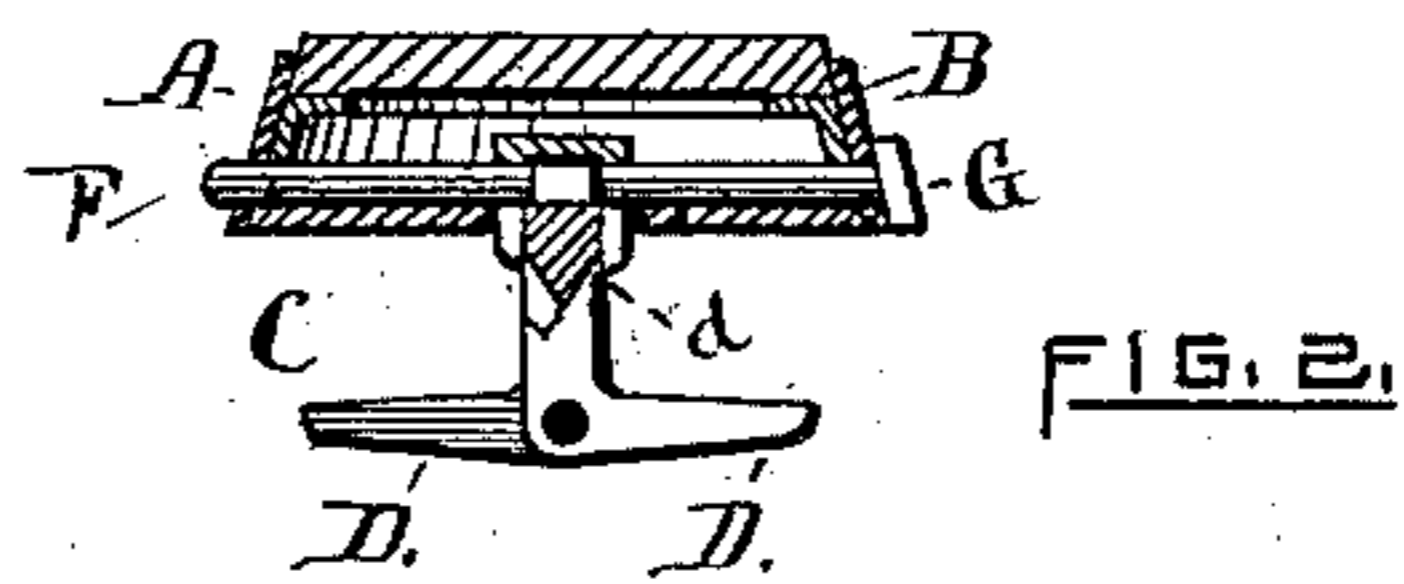
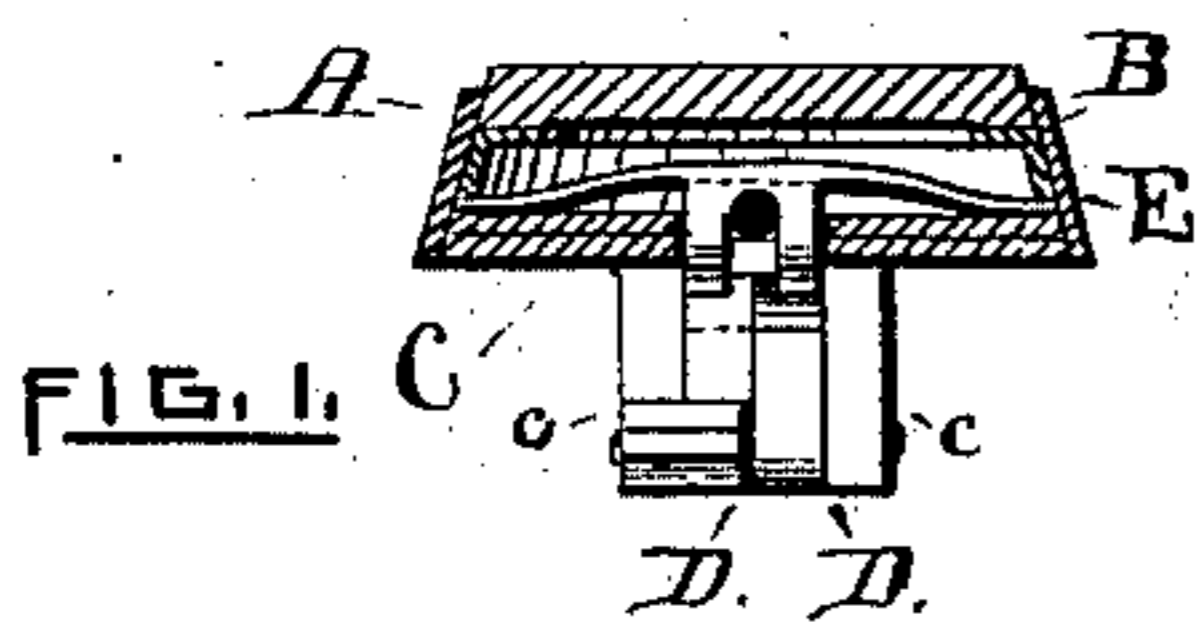
(No Model.)

N. F. MATHEWSON.

BUTTON OR STUD.

No. 311,194.

Patented Jan. 27, 1885.



WITNESSES.

Saml B. D. Granger.

James L. O'Hern

INVENTOR.

Nathan F. Mathewson

By Matt W. Vincent atty.

UNITED STATES PATENT OFFICE.

NATHAN F. MATHEWSON, OF PROVIDENCE, RHODE ISLAND.

BUTTON OR STUD.

SPECIFICATION forming part of Letters Patent No. 311,194, dated January 27, 1885.

Application filed November 7, 1884. (No model.)

To all whom it may concern:

Be it known that I, NATHAN F. MATHEWSON, of Providence, in the State of Rhode Island, have made certain new and useful Improvements in Buttons or Studs; and I do hereby declare that the following specification, taken in connection with the drawings making a part of the same, is a full, clear, and exact description thereof.

Figure 1 is a vertical section of my improved button. Fig. 2 is a vertical section at right angles to Fig. 1, showing position of parts when button is adjusted to the cuffs. Fig. 3 is a vertical section showing position of parts with button ready for insertion. Fig. 4 is a top and side view of the bottom plate or disk. Fig. 5 is a perspective view of the spring. Fig. 6 shows device for operating the spring. Fig. 6½ shows back of button, with locking-levers closed. Fig. 7 is a vertical section, as in Fig. 2, showing a change of device for operating the spring. Fig. 8 is a vertical section of same, showing levers open. Fig. 9 is a top view of back plate and spring, with change device for operating the latter.

The object of my invention is to produce a button or stud which may be easily inserted in and withdrawn from the cuff, and at the same time so constructed that it will not be likely to get out of repair; and it consists in the construction and arrangement of the levers and the devices for securing, releasing, and operating the same, as hereinafter described.

In the drawings, A is the outer rim or shell of the button, having an interior annular rim, B, to support the setting.

C is the back plate or disk, (more clearly shown in Fig. 4,) having two central rectangular slots, *a a*, and having also upon its exterior surface two perpendicular posts, *c c*, between the bases of which, covering the space between the slots *a a*, is a wedge, *d*.

D D are elbow-levers notched at one end, and having their fulcrums upon a rod connecting the free ends of the posts *c c*.

E, Fig. 5, is a spring which is placed upon the plate C within the button, and is confined at either end by the annular rim B, which may extend downward within the shell A, or, with a straighter spring, may be simply a flat piece. The spring E is provided with four prongs, *e e*, which, when the spring is adjusted, pass

through the slots *a a*, two upon each side of the wedge *d* and in contact therewith, only extending, however, to the foot of the bevel upon the same.

F, Fig. 6, is an arbor which extends across the button, passing under the spring E, as shown in Figs. 1, 2, and 3, and having attached thereto near the center a lug, *f*, and at one end upon the outside of the shell a lever, G.

Commencing with the parts in the position shown in Fig. 3, the operation of my invention is as follows: The long arms of the elbow-levers D D are inserted in the button-hole and forced through the same until the short arms come in contact with the fabric upon either side, when the continued pressure upon the button will cause the levers to work upon their fulcrums, the short arms moving backward and the long arms spreading out upon the opposite or inside of the cuff. This movement of the levers continues until the long arms reach a horizontal position, as shown in Figs. 2 and 6½, and the notches in the short arms engage with the wedge *d*. Before the notched arms can be seated upon the wedge *d* the long point of the notch comes in contact with and forces back the prongs *e e*, overcoming the resistance of the spring E, to which they are attached or form a part. As soon, however, as the notched arm of the lever has fully reached its seat the long point of the notches will have cleared their respective prongs, when the latter, through the release of the spring, will resume their former position and overlap the seated point of the levers and lock them in a manner well understood.

When it is desired to remove the button, the top is seized with the thumb and fingers, the forefinger raising the lever G to the position shown in Fig. 3. The raising of the lever G turns the arbor F and raises the spring E through the action of the lug *f*, as will be readily understood. As the spring E is thus raised, so are the prongs *e e*, attached thereto, until the short arms of the lever become free, when the continued pull will cause the levers to work upon their fulcrums back to the position shown in Fig. 3, and the button to be removed from the button-hole.

In Figs. 7, 8, and 9 another method of raising the spring E is shown, which consists of a furcated wedge, H, which is forced under the

spring by the action of the thumb upon the push-bar I, a spiral spring, J, being used to throw back the wedge and release the spring.

As the spiral spring is required to be of considerable strength, it is likely to get out of order, and I do not therefore consider it the best device. The spiral spring may, however, be removed and a vertical slot made in the side of the shell A, which will permit the wedge H to be used as a lever to raise the spring by the action of the thumb upon the protruding bar I.

What I claim as my invention, and desire to secure by Letters Patent, is—

15 1. The plate C, having posts *c c* and wedge *d*, for supporting and seating the elbow-levers D D, in combination with said elbow-levers D D and spring E, the whole constructed and operating substantially as described.

20 2. The lever-operated spring E, having prongs *e e*, in combination with the plate C

and elbow-levers D D, for locking and releasing said levers D D, in the manner and for the purposes substantially as described.

3. The combination of the pronged lever-operated spring E, plate C, as described, and elbow-levers D D, the whole constructed and operating substantially as specified.

4. The combination of the plate C, lugged raising-lever F, and pronged spring E, the whole arranged and operating substantially as described.

5. The combination of the shell A, annular rim B, pronged spring E, raising-lever F, plate C, and suitably-supported elbow-levers D D, the whole arranged and operating together substantially as described.

N. F. MATHEWSON.

Witnesses:

WALTER B. VINCENT,
JAMES D. O'HERN.