(No Model.)

J. H. GILL.

IMPLEMENT FOR CAPPING AND DECAPPING CARTRIDGES.

No. 257,860. Patented May 16, 1882.

Fig. 1.

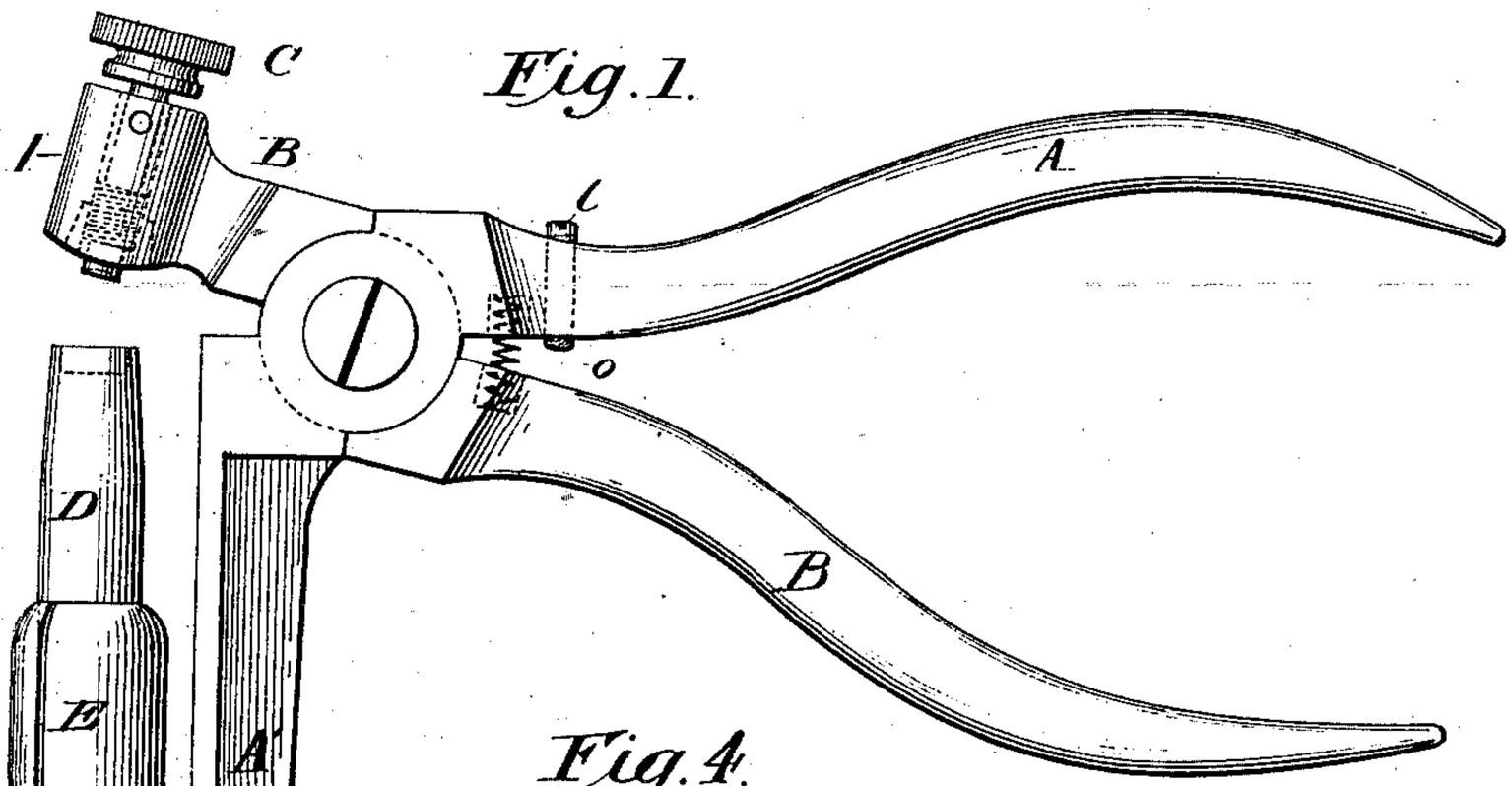


Fig. 4.

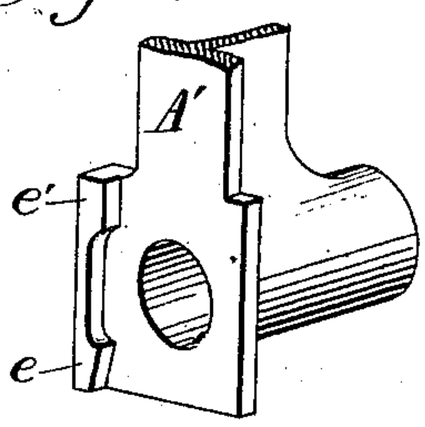


Fig. 5.

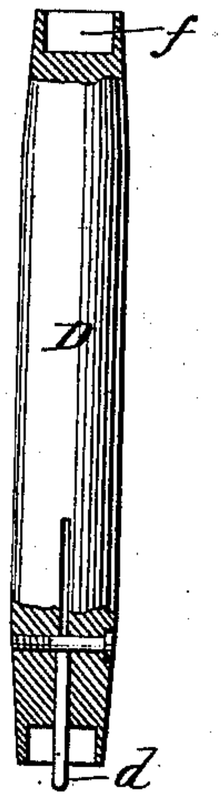


Fig. 2.

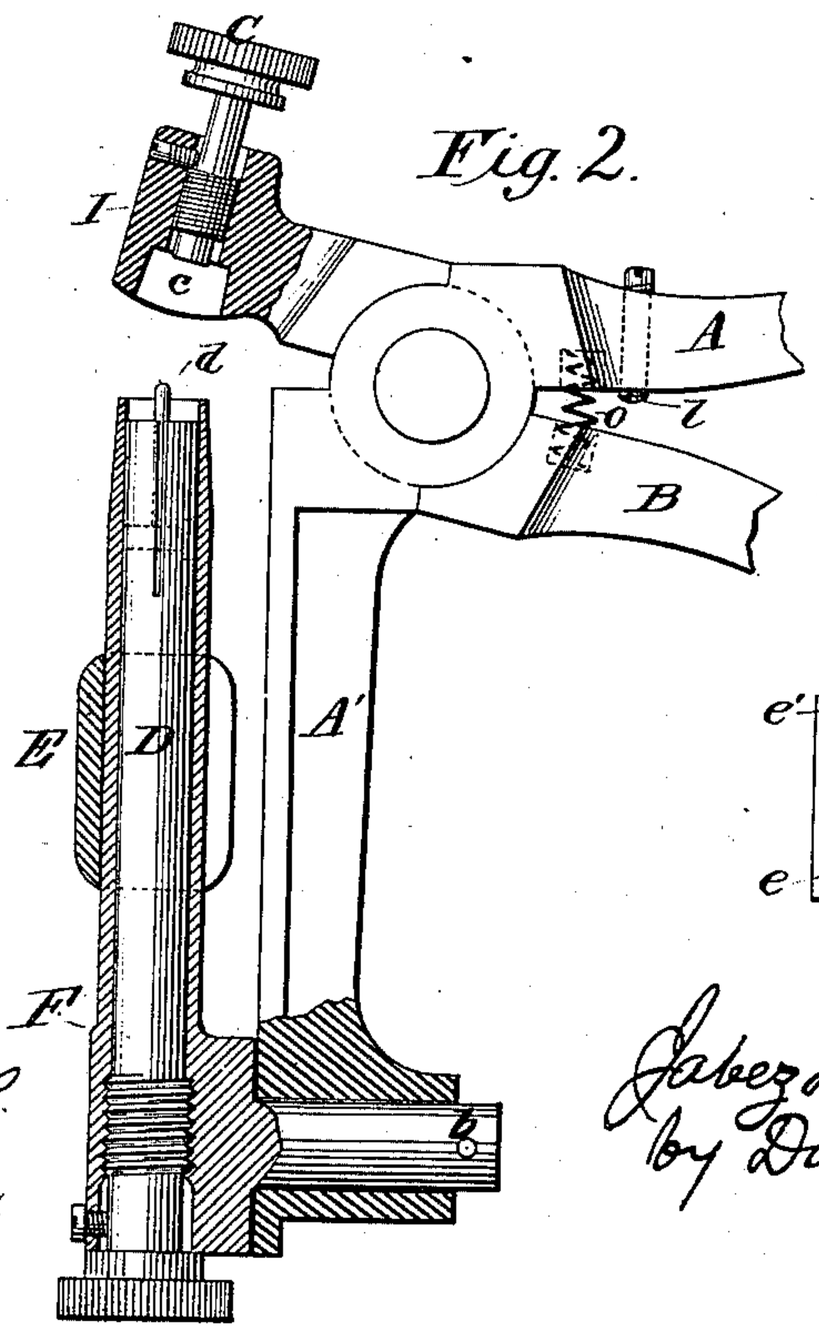
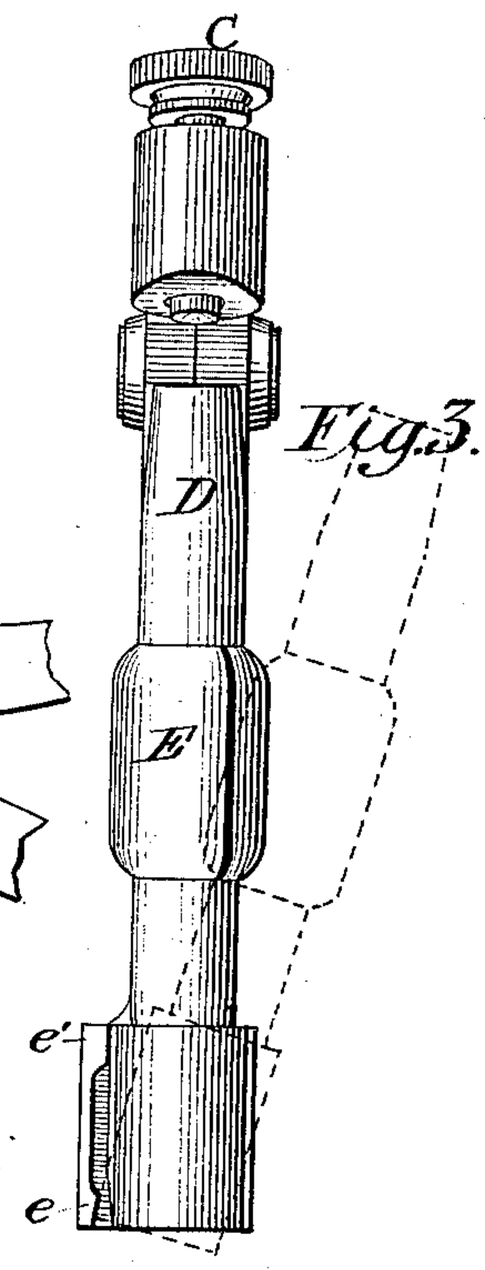


Fig. 3.



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UNITED STATES PATENT OFFICE.

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IMPLEMENT FOR CAPPING AND DECAPPING CARTRIDGES.

SPECIFICATION forming part of Letters Patent No. 257,860, dated May 16, 1882.

Application filed January 21, 1882. (No model.)

To all whom it may concern:

Be it known that I, JABEZ H. GILL, of the city of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Implements for Capping and Decapping Cartridges used in Sporting and Military Arms; and I do hereby declare that the following specification, when taken in connection with the accompanying drawings, is such a full, clear, and exact description of the same as will enable others skilled in the art to which my invention pertains to make and use the same.

This invention relates to that class of tools or implements designed for removing the exploded caps or primers from metallic cartridge-shells, and also for inserting caps or primers; and the invention consists in a novel construction of the implement, whereby it is adapted not only to perform these operations in a very efficient manner, but also to do it with shells of various sizes, as hereinafter more fully set forth.

Figure 1 is a side elevation; Fig. 2, a side elevation, partly in section, and representing a modification of one of its parts. Fig. 3 is a front elevation, and Figs. 4 and 5 are views of portions of the implement shown detached.

The implement is constructed with two handles, A and B, which are pivoted together, like those of the ordinary pinchers or pliers, as represented in Figs. 1 and 2. The front end of the one handle, B, is provided with an enlargement or head, I, having a recess, *c*, in its lower face, and with a central hole extending from said recess through the head, in which is seated a plunger or punch, C, provided at its upper end with a milled head, it being also provided with a screw-thread fitting a corresponding thread in the head I, as shown in Fig. 2, whereby the punch can be made to protrude, as represented in Figs. 1 and 3, or be withdrawn, as represented in Fig. 2, as may be desired. The other arm, A, at its front end is provided with a rigid pendant or bar, A′, at right angles to the arm, and which at its lower end is provided with a transverse hole for the reception of a journal, *b*, as shown in Figs. 1 and 2. In Fig. 4 the lower portion of this pendant A′ is shown in perspective and detached to more clearly illustrate its construction and show the rib or projection *e*, which serves as a stop to limit the movement of a certain part, as hereinafter explained. I then construct a piece, F, with a journal, *b*, to fit in the hole in the lower end of the pendant A′, and which piece F is either provided with a socket for the reception of the stud D, as represented in Fig. 1, or which may be made in the form of a sleeve, as shown in Fig. 2, as may be preferred. If made as shown in Fig. 1, I then provide a stud or round bar, D, slightly tapered at each end, so as to fit snugly in the socket in the journaled piece F, as represented in Figs. 1 and 3. This bar or stud D has a central recess, *f*, made in each end, as shown in Fig. 5, and one end is provided with a small pin, *d*, which protrudes beyond the end of the stud, as shown. When the stud D is placed in the socket in the piece F (which, as before stated, is journaled to the pendant A′) the stud D can be swung to one side, as indicated by the dotted lines in Fig. 3, its movement being limited by the stop *e′*; or it can be swung to a vertical position until it strikes the stop *c′*, in which case its upper end will be brought directly under the head I of the arm B.

It will be observed that the stud D, when constructed as shown in Figs. 1, 3, and 5, can be reversed end for end and held in its socket, it being designed to be used one end up to remove the primer from the shell and the other end up to insert a primer, as hereinafter described. If, however, the piece F be made in the form of a sleeve, as represented in Fig. 2, then the stud D, instead of being reversible, may be made adjustable longitudinally in the sleeve by a screw-thread or otherwise, and be made to answer the same purposes. By screwing it up so that the pin *d* will protrude beyond the end of the sleeve F it will serve to punch or push the primer out of the shell; and when screwed down so that the pin *d* is below the end of the sleeve the parts will be in proper condition to receive and hold a shell while the primer is being inserted. Either form may be used, as may be preferred.

In order to adapt the implement to cartridge-shells of different sizes, I provide a sleeve, E, which is of the proper size to slip over the stud D or the sleeve F, according as one or the other may be used, and which is preferably slit lengthwise, so it can be readily slipped on or off, and yet have sufficient friction to hold it

securely in place when on. By providing a series of these detachable sleeves E it will be seen that the implement can be used to cap or uncap any and all sizes of cartridge-shells, it only being necessary to make the stud D small enough to receive the smallest-sized center-primed shell, and then make the several sleeves E of sizes to correspond with the various sizes of shells.

A spiral spring, *o*, or any other style of spring may be arranged to throw the arms apart, and a set-screw, *l*, is inserted in one of the arms, so it can be set to limit the movement of the arms, and thereby insure the setting of the primers at a uniform depth, and at the same time prevent an accidental explosion by driving the primer with force against the anvil in the pocket of the shell or in the primer itself, according as the one or the other arrangement of primer may be used, both being common.

It will of course be readily understood that the mechanical details may be varied more or less without changing the essential features of my invention. For instance, instead of the stops *e* and *e'*, a slot or recess of the proper length may be made in the face of the pendant A' or in the face of the piece F, and a pin be fitted in the other part and made to move in said slot or recess, and thereby limit the swinging movement of the stud D. So, too, instead of using a screw-thread for adjusting the stud D in the sleeve F, an L-shaped slot may be made in the part F, in which a pin or screw secured to the stud D may move, and thus lock the stud up when raised or let it down when desired. The construction shown is, however, thought to be best.

The method of using the implement will readily be understood by persons familiar with the art. To remove a primer, the stud D is swung to one side, as indicated by the dotted lines, and a shell is slipped thereon, the stud being arranged with its pin *d* uppermost, after which it is swung back, so as to bring the shell under the head I of the arm B. The plunger or punch C, having been screwed back, as indicated in Fig. 2, the arms are then pressed together, which causes the head I to press on the head of the shell, driving it down on the stud D, and thereby causing the pin *d* to penetrate the vent-hole in the head of the shell, and, coming in contact with the primer, to push it out of the pocket in the head of the shell. To insert a primer, the stud D is reversed so as to bring its recessed end uppermost, and the plunger or punch C is screwed down, as indicated in Figs. 1 and 2. A shell is then placed on the stud, as before, a primer is placed in the mouth of the pocket of the shell, the stud swung back under the head I, when, the arms being pressed together, the punch *c* is brought down upon the primer, thereby forcing it into the pocket of the shell to the required depth.

It will of course be understood that if the device be constructed as shown in Fig. 2, instead of reversing the stud for these operations, it will simply be adjusted up or down.

To adapt the implement to be used as a bench-tool, it is only necessary to provide it with suitable means for securing it to the bench or to any fixed object, and this is such an obvious matter to any skilled mechanic that it is not deemed necessary to further describe it.

Having thus fully described my invention, what I claim is—

1. The arm B, provided with the head I, having the recess *c* and adjustable punch C, in combination with the arm A, provided with the pendant A', having the support or sleeve F journaled to its lower end, with the reversible or adjustable stud D, said parts being constructed and arranged to operate substantially as and for the purpose set forth.

2. In combination with the pivoted arms A B, the stud D, provided with the detachable spring-sleeve E, said stud D being journaled to the pendant A' of the arm A, the construction and arrangement being substantially as shown and described.

3. In combination with the arm B, provided with the head I and adjustable punch C, the arm A, having the holding socket or sleeve F journaled thereto, as shown, and the stud D, provided with the detachable sleeve E, all arranged for joint operation as set forth.

JABEZ H. GILL.

Witnesses:
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D. W. LYON.