C. W. CORR.

Cartridge Capping and Uncapping Implement.

No. 227,349. Patented May 11, 1880.

FIG. 1.

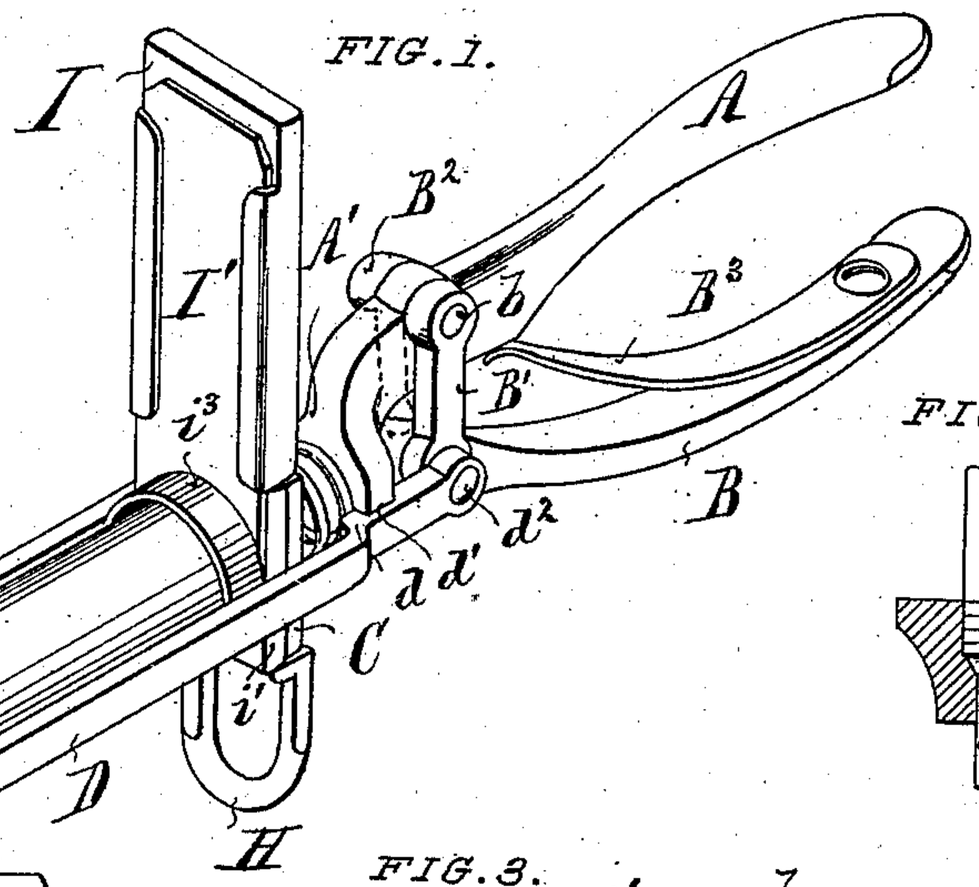


FIG. 5.

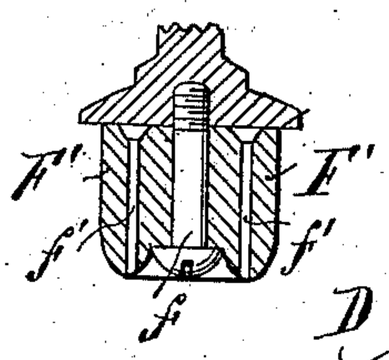


FIG. 6.

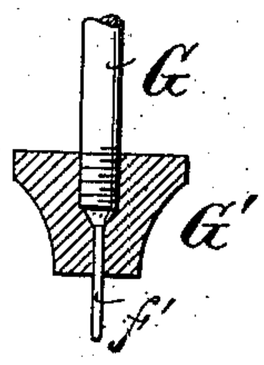


FIG. 3.

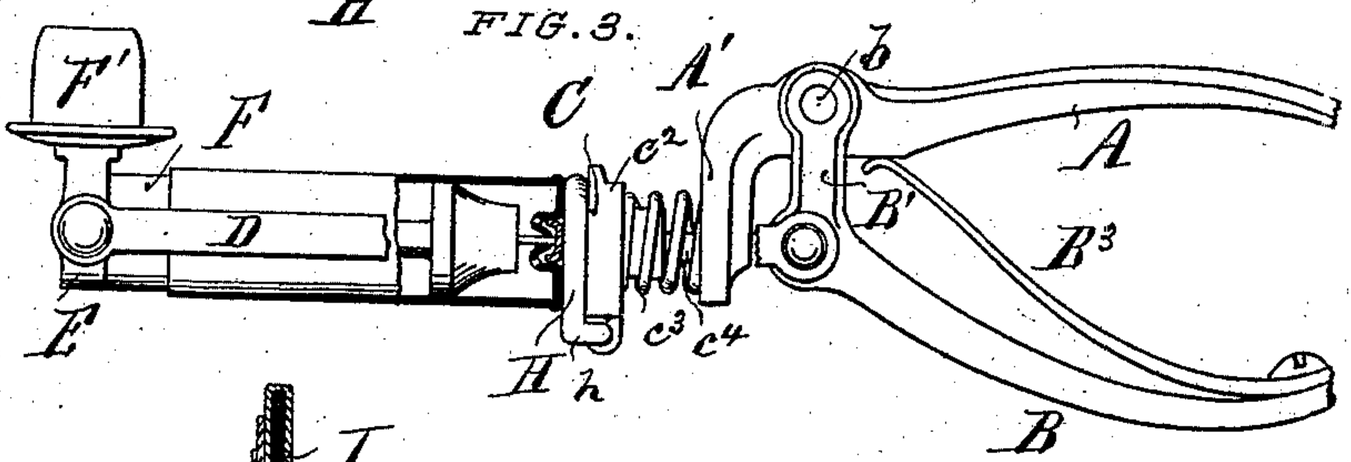


FIG. 2.

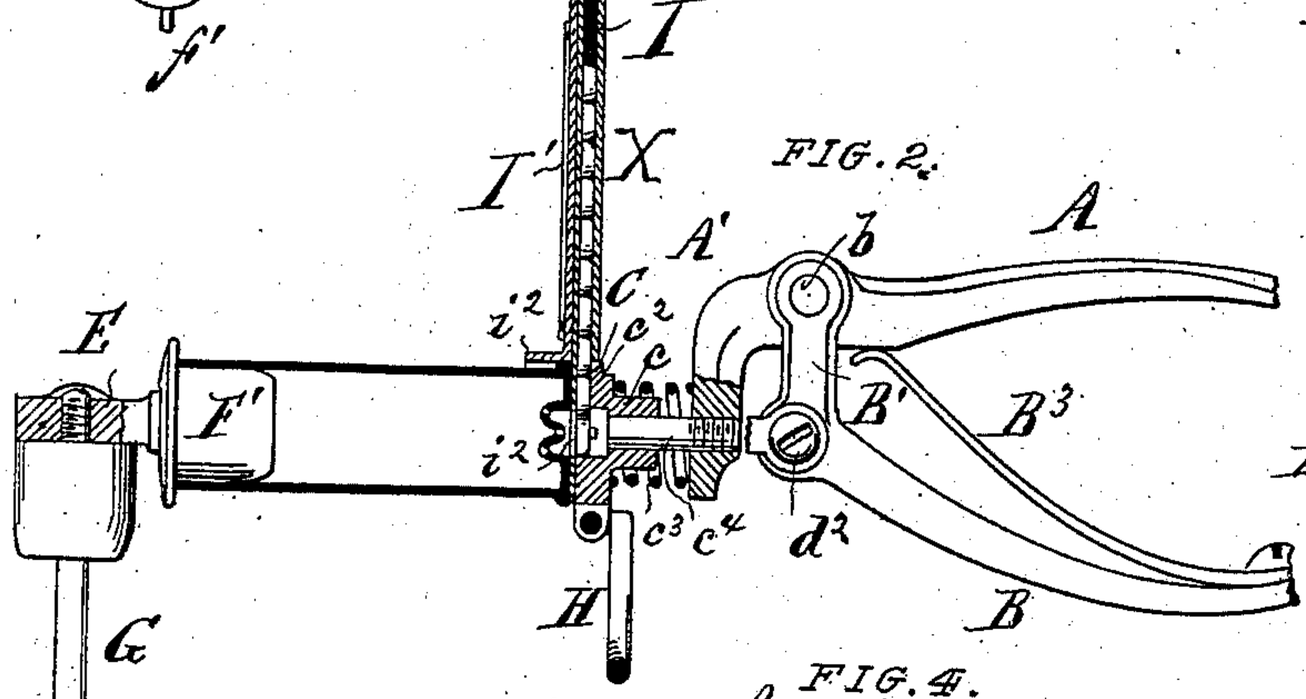


FIG. 7.

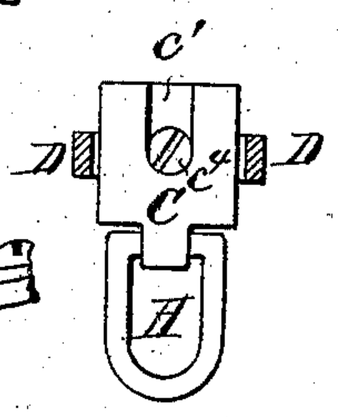
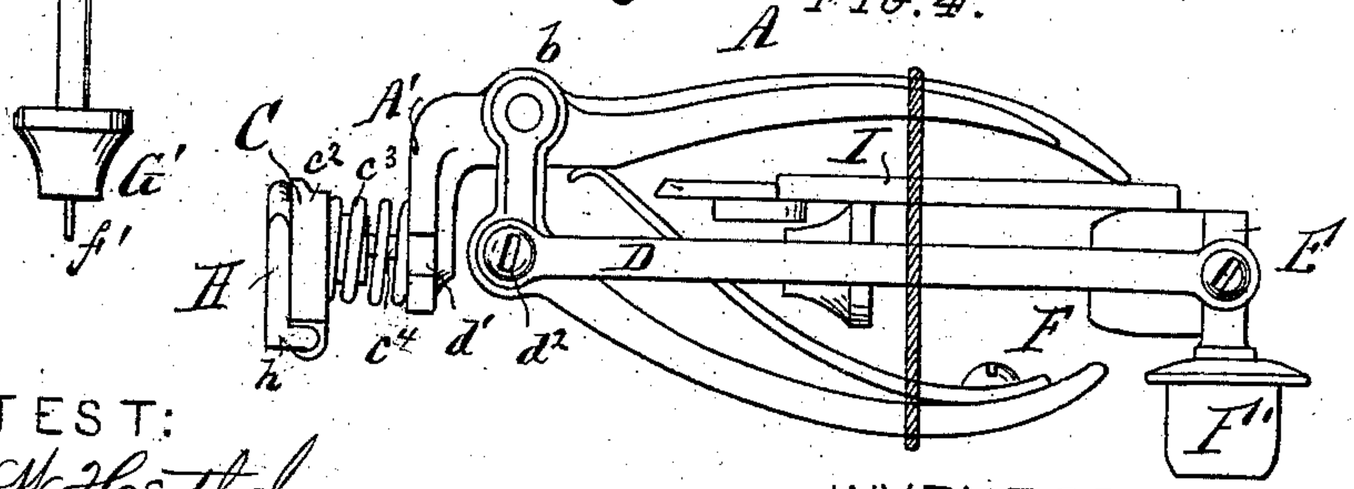


FIG. 4.



ATTEST:

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UNITED STATES PATENT OFFICE.

COLUMBUS W. CORR, OF CARLINVILLE, ILLINOIS, ASSIGNOR TO JAMES H. CAMPBELL, OF SAME PLACE.

CARTRIDGE CAPPING AND UNCAPPING IMPLEMENT.

SPECIFICATION forming part of Letters Patent No. 227,349, dated May 11, 1880.

Application filed March 29, 1879.

To all whom it may concern:

Be it known that I, COLUMBUS W. CORR, of Carlinville, Macoupin county, and State of Illinois, have invented an Improved Device for Placing Caps on and Extracting same from Cartridges, of which the following is a specification.

The object of this invention is to form an improved device or tool for readily placing caps on loaded metallic cartridges, and also readily extracting the exploded cap from the empty cartridges, employed in the use of breech-loading fire-arms.

Of the drawings, Figure 1 is a perspective view of my improved device, showing the cap-case and shell in position preparatory to operating the parts to properly seat the cap on the shell or cartridge. Fig. 2 is a part sectional and side elevation of the parts seen in Fig. 1, showing further the caps contained inside the cap-case in line with the nipple of the shell preparatory to charging the shell with one of the caps. Fig. 3 is also a side view and part section of the tool, showing the parts in position for properly extracting the cap from the shell, the cap-case being removed. Fig. 4 is a side elevation of the entire tool as same appears when put together in a compact condition for handling purposes. Figs. 5 and 6 are detail sections of parts belonging to the cross-head. Fig. 7 is a front view of follower, piston-head, and hanger.

A is one of the handles, having the bent head A′. B is the other handle, having the two arms B′ B². (More clearly shown in Fig. 1.) The head A′ is bent at right angles, so as to bring its broad face immediately in front of the lower handle, with sufficient space between for the free operation of both handles. The arms B′ B² project in an upward direction at right angles, and are fulcrumed at *b* to the upper handle, so that the handles can be operated to open and close like those of pinchers. The spring B³ between the handles throws them apart when same are pressed together. The opening and closing of the handles impart a reciprocating action to operate the parts, by means whereof the caps are placed on or extracted from the shells, and said parts are as follows:

C is a follower, against which the shell or cartridge is pressed. This follower is of the constructive shape shown in Figs. 2 and 7, so as to have a cylinder-socket, *c*, a channel, *c′*, and a shoulder at *c²*. *c³* is a spiral spring surrounding the socket and placed between same and the head A′. A screw-piston, *c⁴*, passes through the follower, its socket, and the spring, and unites said parts to the bent head A′, as shown in Figs. 1, 2, 3, and 4. The spring permits the follower to be pressed backward, exposing the piston-head, and also restores the follower to first position immediately in front of the piston-head.

D D are two parallel bars, each having at *d* a shoulder to fit in notches *d′* on each side of the head A′. (See Figs. 1 and 4.) Each bar is pivoted at *d²* to the lower handle, while the outer end of each bar is pivoted to a cross-head, E. (See Figs. 1, 2, 3, and 4.) To the cross-head the bosses F F′ are connected at right angles to each other. That of F can be rigidly connected, while that of F′ is detachably connected. For this latter purpose a screw, *f*, passes through the boss to screw same to the face of the cross-head. (See Fig. 5.) The boss F′ is thus adapted to contain a reserve number of the headed pins *f′*, (see Fig. 5,) so that in case one of these becomes broken it can be readily replaced by one contained in the detachably-connected boss F′. On this boss F′ the loaded shell or cartridge is placed for purpose of placing on the latter its required cap. (See Figs. 1 and 2.) From the boss F projects a stem, G, screw-threaded at its lower end. (See Figs. 1, 2, and 6.)

G′ is a cap, having an opening to permit the cap to be partially screwed on the end of the stem. Further, from the end of the stem the cap G′ has a smaller hole to suit the shape of one of the headed pins *f′*. (See Figs. 1, 2, 6.) The pin *f′* is placed inside the cap, so that it shall partially project from the outer face of the cap, the head of the pin being held fast between the end of the stem and the seat in the cap when the latter is screwed on the stem, as shown. The screw-cap G′ is thus made a means to rigidly seat the headed pin; and, since said cap can be readily screwed on or off the stem, the pin can also be readily removed

or replaced, or a new one substituted in case of breakage. The pin projects from the cap sufficient to pass through the head of the shell at its firing-hole, for the purpose of forcing the percussion-cap from the shell. The screw-cap G′ guides the pin to come properly in line with the hole in the nipple of the shell. The empty shell is therefore placed over the screw-cap and its pin and stem, so that one end of the shell shall engage the boss F in manner indicated in Figs. 2, 3.

H is a hanger, bent to have a shoulder at *h*, and otherwise is of the constructive shape shown in Figs. 2, 3, 7. The hanger, by its shoulder, is hinged to the lug of the follower, as shown. The hanger can thus be turned upward to lie against the vertical face of the follower, (see Figs. 3, 4,) or be turned down, as shown in Figs. 2, 7. The purpose of this hanger is to provide an intervening bearing between the head of the empty shell and the follower, in order that the cap forced away from the nipple of the shell shall have free play to drop out of the channel of the follower.

I is the percussion-cap case. As shown in Figs. 1, 2, it is a rectangular-shaped box closed on all sides, its interior chamber being of such dimensions that the caps contained inside cannot change their positions or turn the wrong side to the shell.

The proper position for each cap in the case I is when the head of the cap faces the piston-head when the cap-case is used. (See Fig. 2.) In filling the cap-case with caps, insert each so that its head or closed part shall lie against the back of the cap-case. (Marked X, Fig. 2.)

The front side of the cap-case is the longest, and has at i' flanges and at i^2 a circular opening. The flanges serve to retain the cap-case in position by engaging the beveled edges of the follower. The opening in the cap-case should be large enough to permit the passage through same of a single cap at a time.

I′ is a slide, fitting in the flanges on the front of the cap-case in such a manner that said slide can be removed from or closer to the opening. Forming part of the slide is a curved flange, i^3, to serve as a guide as well as a holdfast to move the slide.

The cap-case thus constructed and filled with caps is placed on the follower to occupy the position shown in Figs. 1, 2, the back face, X, resting on the shoulder c^2, while the front face, *i*, covers the front of the follower and brings the opening in line with the piston-head.

The entire device, constructed as described and shown, is used and operated in the following manner:

To charge the loaded shell or cartridge with percussion-caps: The percussion-caps being contained in the cap-case and this placed on the follower, as indicated, it will be noted that the top of the follower inside the cap-case will only permit one cap at a time to fall down its channel and remain there in line or range with the piston-head and the opening in the cap-case. The loaded shell or cartridge is next placed in position, (see Figs. 1, 2,) so that the open end thereof shall engage the boss F′, while the head of the shell is seated against the guide or flange of the slide I′. The tool and shell are held in one hand. By next grasping with the other hand the handles together the head of the upper handle with its parts is brought against the head of the shell, and, continuing the closing action of the handles, the piston is forced forward, driving at same time the cap through the opening until the cap is properly seated on the nipple of the shell. Releasing the handles restores the parts, so that the shell with its cap can be removed and the operation be repeated with a new cartridge.

To extract the cap from the empty shell: Place the empty shell, as indicated in Fig. 3, so that one end thereof shall engage the boss F, while the head of the shell with its cap is brought in line with the piston-head. The hanger H should be turned up to lie against the face of the follower, as shown. This done, press the handles quickly together to force the follower and its parts against the shell and cause the projecting pin to pierce through the nipple-opening against the cap, and the same will be forced away or extracted from the shell. The shell is then removed and another with its cap replaced, to extract its cap in the same manner. As is apparent, the removal and replacing of the shell are quickly done; also the placing on or extracting the shells of the caps is quickly done, and that without danger or injury, since the caps need not be handled.

The slide of the cap-case, being movable, serves also to suit the different sizes of shells and guide the seating of same immediately before the follower, so that the nipple can always be properly in range for purposes of placing on or extracting the caps.

The parallel bars carrying the bosses, &c., can be turned back and all the parts be made to assume the condition shown in Fig. 4. A suitable band retains the tool in said compact condition, and therefore it occupies less space and can be better handled or stored.

What I claim is—

1. In combination with the head A′, the follower C, having socket *c*, the spring c^3, and piston c^4, bars D D, and cross-head E, to operate as and for the purposes set forth.

2. The combination of the handles A B, arms B′ B^2, bent head A′, the spring B^3, the pivoted parallel bars D D, said parts being constructed in the manner and for the purposes set forth.

3. The boss F′, having a series of holes, its screw *f*, headed pins *f′*, in combination with the cross-head E, by means whereof said pins can be stored in said boss and the latter be attached or disconnected from said cross-head, as and for the purposes set forth.

4. The hanger H, having shoulder *h*, in combination with the follower C, as and for the purposes set forth.

5. The cap-case I, the front side thereof being the longest, and having at i' flanges, at i^2 an opening, in combination with the follower C, having the channel c', the shoulder c^2, by means whereof the caps in said cap-case can be seated in said follower, in the manner and for the purposes set forth.

6. In combination with the cap-case, the slide I′, having the flange i^3, as and for the purposes set forth.

7. The combination of the handles A B, arms B′ B^2, the head A′, carrying the follower C, spring c^3, piston c^4, the bars D D, carrying the cross-head E, its boss F′, all said parts being constructed to operate in the manner and for the purposes set forth.

8. The combination of the handles A B, arms B′ B^2, the head A′, the follower C, spring c^3, piston c^4, hanger H, the bars D D, carrying the cross-head E, its boss F, with stem G, screw-cap G′, and headed pin f', said parts constructed to operate in the manner and for the purposes set forth.

In testimony of said invention I have hereunto set my hand.

COLUMBUS W. CORR.

Witnesses:
GEORGE SIEGEL,
WILLIAM COGAN.