(No Model.)

W. A. WRIGHT.

DECAPPING OR RECAPPING IMPLEMENT.

No. 525,065. Patented Aug. 28, 1894.

Fig. 1

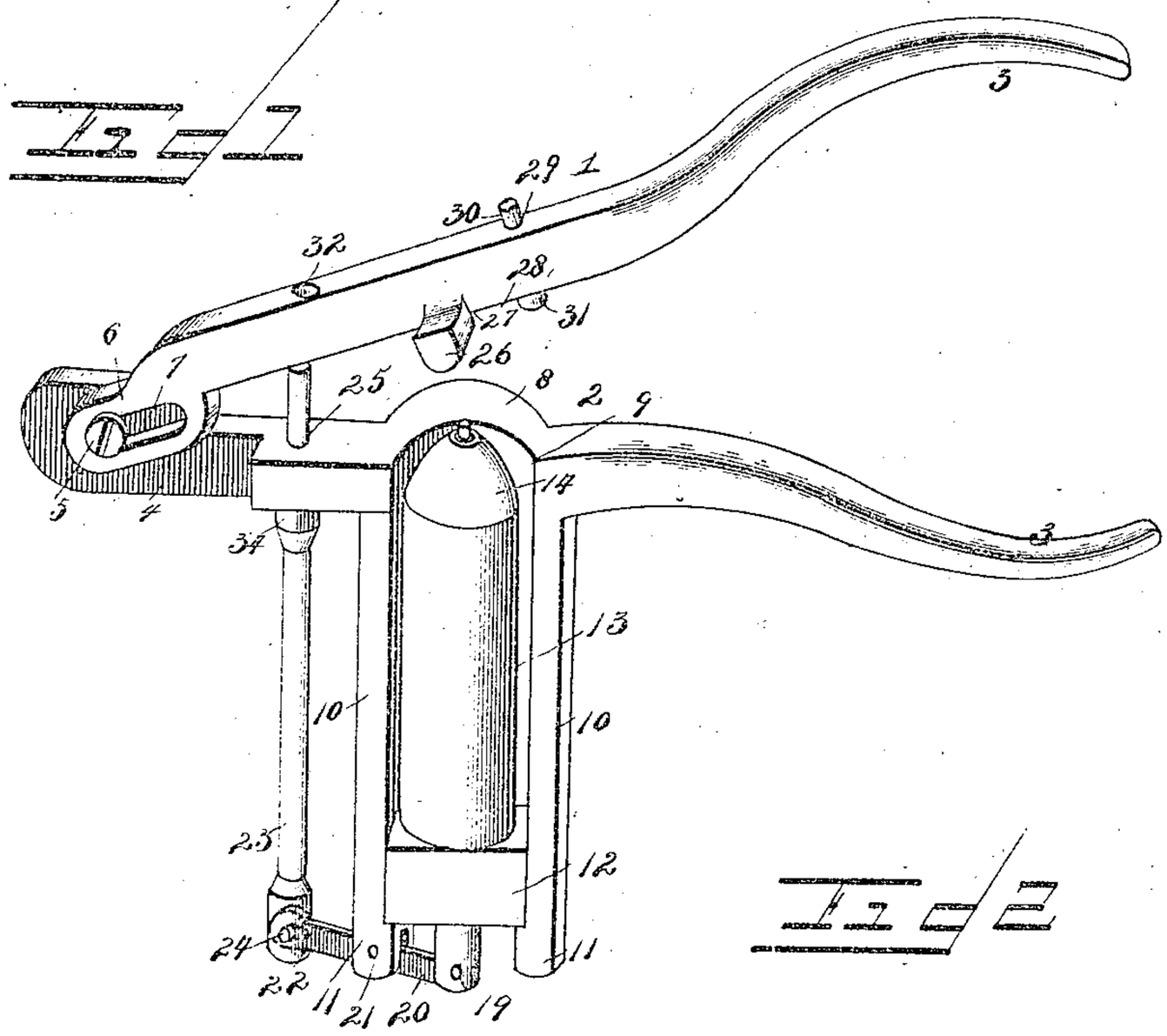

Fig. 2

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DECAPPING OR RECAPPING IMPLEMENT.

SPECIFICATION forming part of Letters Patent No. 525,065, dated August 28, 1894.

Application filed September 23, 1893. Serial No. 486,352. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM ALBERT WRIGHT, a citizen of the United States, residing at South Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Machine for Decapping or Recapping Shells, of which the following is a specification.

My invention relates to machines for decapping and recapping paper and brass shells for pistol, shotgun, or rifle use; and the objects in view are to provide a machine of this class of cheap, simple, and durable construction designed to be operated by hand and requiring no base or bench for its support; that is so constructed as to operate with facility and dispatch; to avoid marring or caving the head or base of the shell either in the removal or application of a cap or primer, and which is adapted for shells for either flat or conical bases or heads.

Various other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings:—Figure 1 is a perspective view of a device embodying my invention. Fig. 2 is a sectional view, the same being in the act of recapping a shell.

Like numerals of reference indicate like parts in both the figures of the drawings.

In the practice of my invention it is my design to so construct the same as to be readily handled and operated by hand without a bench or support therefor, and for this reason it is useful in camping and other places where benches or tables may not be had, and furthermore, the work may be carried on with less labor to the operator. I therefore employ a pair of members 1 and 2, whose inner ends are curved to produce grips or handles 3 similar to an ordinary pair of pincers. The lower member 2 is provided at its opposite or outer end with a recessed head 4, and from the recessed side of the same there extends a bearing-screw 5 whose outer end is headed. The member 1 is at its outer end also provided with a recessed head 6, the recess occurring at the opposite side thereof to that at which it occurs in the member 2, and the said head 6 is provided with an elongated longitudinally disposed slot 7 which loosely receives the screw 5 and is capable of pivotal as well as longitudinal movement thereon.

The member 2 is further provided between its ends with a lateral swell or offset 8, the same forming a corresponding recess 9, and from the under side of this member at diametrically opposite sides of the recess there depends a pair of rigid standards 10 whose lower ends are provided with inwardly disposed lugs or seats 11 above which screw-receiving openings are provided.

Seated on the lugs or seats 11 is the lower rectangular base 12 upon which is formed a cylindrical post 13 the same being hollow or bored and having its upper end reduced or made conical as at 14. The base of the post is secured between the standards through the medium of opposite screws 15 that pass through the perforations, mentioned as being formed in the standards, into said base. The diameter of the post is less than the distance between the inner surfaces of the standards 10, so that a space is formed intermediate the exterior of the post and the standards. The upper end of the post is curved slightly below the upper plane of the member 2.

The bore of the post is reduced near its upper end, and in the upper reduced portion there is located the plunger 16 whose lower end is secured to a reciprocating bolt 17 of greater diameter and fitting loosely the enlarged or lower portion of the aforesaid bore of the post. A coiled spring 18 of sufficient strength is coiled upon the plunger 16 and compressed between the upper end of the enlarged portion of the bore and the corresponding end of the bolt 17, so that it exerts a constant tendency to force the bolt downward and withdraw the upper end of the plunger into the post. The lower end of the bolt is bifurcated and supports a rocking-lever 20, which between its ends is fulcrumed upon a bearing-screw 21 which passes through the lower bifurcated end of the outer standard 10. The outer end of this lever is slotted as at 22 and passes between the lower bifurcated end of a reciprocating rod 23 to which it is pivoted by a bearing-screw 24. The upper end of this rod 23 passes through a perforation 25 formed in the member 2 between the head 8 and the outer end or pivot point between the members, and by reason of the

downward pressure of the spring before mentioned the upper end of said rod 23 is normally extended above the plane of the member 2. The upper member 1 is provided between its ends with a transverse bearing-rib 26, the same having its inner side or wall provided with a curved recess 27 that partially surrounds a cavity 28 formed in the under side of the aforesaid member 1. Immediately in rear of this cavity a conical transverse perforation 29 is formed in the member 1, and driven therein is the conical shank 30 formed upon the upper side of a capping plug 31 whose under side is concaved as shown. By reason of the conical shape of the shank 30 of this capping plug it will be seen that a slight tap upon the upper end thereof will serve to unseat it, and another plug of different size may be inserted upwardly into the perforation and readily seat itself for use.

In rear of the bearing-rib 26 the upper member 1 is provided with a vertical hole or perforation 32 slightly greater in diameter than the upper end of the rod 23, and again in rear of this the under side of said member 1 is provided with a shallow cavity 33, which when the members 1 and 2 are in certain relative positions is designed to receive and bear upon the upper end of said rod 23, all as will hereinafter appear. This completes the construction of the tool, and the description of the operation of decapping and recapping is as follows:—To decap, the upper member 1 is raised and an empty shell, either paper or brass, is placed upon the post and it will be seen that regardless of the internal shape or contour of the base of the shell the apex of the post will be directly at the priming cavity and contact with such base only at that point, so that any caving in or injury to the base of the shell is impossible and any slight excess of pressure will not injure the shell and render the same defective so as to miss fire when attempting to explode it. The shell having been placed in position, the upper member 1 is drawn toward the operator, which brings the transverse rib 26 over the rim of the shell. The two members are now brought toward each other, and the cavity 33 receives the upper end of the rod 23, and bearing upon said rod forces the latter downward and the inner end of the rocking lever 20 upward against the tendency of the coiled spring within the post. This advances the plunger 16, which passes up into the primer or cap through the cavity for the same in the shell, the shell being prevented from rising by reason of the transverse bearing-rib 26 which has a broad bearing upon the base thereof. The cap having been removed the upper member is released and is drawn upward by the actuating rod 23, the same being limited in its upward movement by a stop 34 formed at an intermediate point thereon and contacting with the under side of the number 2. The release of the member 1 causes the plunger to retract, the old primer or cap falling to the floor or ground. Thus it will be seen that the device will efficiently decap exploded shells and in such manner as to positively avoid any injury to the base of the shell so as to render the same imperfect.

To recap or reprime shells the operation is much the same, being slightly varied in accordance with the following description: The shell being decapped, the upper member 1 is slid or moved away from the operator so that the perforation 32 will be coincident with the upper end of the rod 23. The members are swung apart and the shell to be recapped is slipped over the post as before and assumes the same position. The primer or cap is then placed in the cavity for its reception formed in the base of the shell and the two members swung toward each other. This forward movement upon the part of the upper member brings the capping-plug into alignment with the cavity in the shell, and being concaved the said plug bears upon the outer edge of the cap or primer, at which point there is no danger of explosion, snugly to its seat or cavity in the head of the shell. This having been accomplished the upper member is swung from the lower and the shell removed, and is in condition for reloading. The same advantages of noninjury to the shell occur in the operation of recapping or reprimming, as described in connection with decapping, and hence it will be unnecessary to repeat the same. It will be obvious that in the operation just described the plunger remains inactive that is, is not advanced by a bringing together of the two members, and this is by reason of the fact that the rod 33 is not actuated by the upper member but passes idly into the perforation 32 with which such upper member is provided.

From the foregoing description in connection with the accompanying drawings it will be seen that I have provided a very simple and convenient device for the purpose in view, the same being designed to be operated by hand in an expeditious manner and serving the double function of decapping and recapping shells of various styles and absolutely without injury thereto.

Changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having described my invention, what I claim is—

1. The combination of the opposite pivoted members, the opposite rigid standards depending from one of the members, a post arranged between the standards and adapted to receive a shell, a plunger arranged within the post, and devices for actuating the plunger, substantially as described.

2. The combination of the opposite pivoted members, the opposite rigid standards depending from one of the members, the post arranged between the standards and having

its lower end detachably secured to the same, a plunger arranged in the post and depending below the same, and an actuating rod arranged parallel with the standard and having its lower end connected with the plunger and having its upper end arranged to be engaged by the upper member, substantially as described.

3. The combination of the two members pivoted at their outer ends and terminating at their inner ends in handles, one of said members having an intermediate recess from the opposite sides of which depend standards, a post seated in the standards and terminating at its upper end in the recess, a reciprocating plunger arranged in the post, a spring for retracting the same, a rocking-lever fulcrumed on the lower end of one of said standards and connected to the plunger and an actuating rod mounted for movement at the side of the standard pivotally connected at its lower end to the rocking lever and adapted at its upper end to be borne upon by the upper member, substantially as specified.

4. The combination of the opposite members pivoted at their outer ends, the lower member having depending standards terminating at their lower ends in lugs, or seats, a post having a rectangular base seated upon the lugs and secured in position between the standards, a rocking lever pivoted between its ends in a slot in one of the standards and having its opposite ends slotted, the inner one being pivoted to the lower end of the plunger, an actuating rod arranged in a perforation formed in the lower member at one side of the standard and pivoted at its lower end to the outer end of the rocking lever and provided with a stop adapted to contact with the under side of the lower member, substantially as specified.

5. The combination of the upper and lower members, pivotally connected at their outer ends, the upper member having a limited longitudinal movement, a shell-receiving post carried by one of said members, a plunger mounted in the post, actuating devices operated by the opposite member for operating the plunger, a bearing-rib arranged on the upper member and adapted to contact with the base of a shell when said member is moved in one direction, and a cap setting plug carried by said upper member and adapted to bear upon the shell when said member is moved in the opposite direction, substantially as specified.

6. The combination of the upper and lower members pivotally connected at their outer ends, the upper member having a limited longitudinal movement the shell-receiving post carried by the lower member, the spring-retracted plunger arranged in said post, an actuating rod mounted for reciprocation in a perforation in the lower member and operatively connected with the aforesaid plunger and adapted to be borne upon by the upper member when the latter is moved in one direction and to pass into a perforation formed in said member when moved in an opposite direction, a bearing surface having a shell arranged upon the under side of the upper member and aligning with the shell when said upper member is in position to bear upon the actuating-rod, and a cap setting plug arranged upon the upper member and aligning with a shell seated upon the post when the hole in the upper member registers with the upper end of the actuating-rod, substantially as specified.

7. The combination with the two members provided at their outer ends at reverse sides with recessed heads, that of the upper member being slotted, the lower member having an offset 8 forming a recess 9 the bearing-screw passing through the slot and into the head of the lower member, whereby the two are pivotally connected and the upper member is capable of a limited longitudinal movement, the shouldered standards depending from opposite sides of the recess, the shell-receiving post having a lower rectangular base seated upon the shoulders of the standards and projecting upwardly into the opening 9, the rocking lever 20 fulcrumed at 21 to the front standard, the plunger arranged in the post and pivoted to the inner end of the rocking lever, the actuating rod 23 arranged in the perforation 25 and provided with a stop below the same and pivoted at its lower end to the outer end of the lever, the cavity 33, and perforation 32 formed side by side in the upper member, the transverse bearing-rod 26 having a recess 27 encircling a cavity 28 formed in the under side of said upper member, and the capping plug located upon the upper member at the inner side of the rib 26, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM ALBERT WRIGHT.

Witnesses:
OTIS EDDY BOWEN,
CLIFF QUINN.