

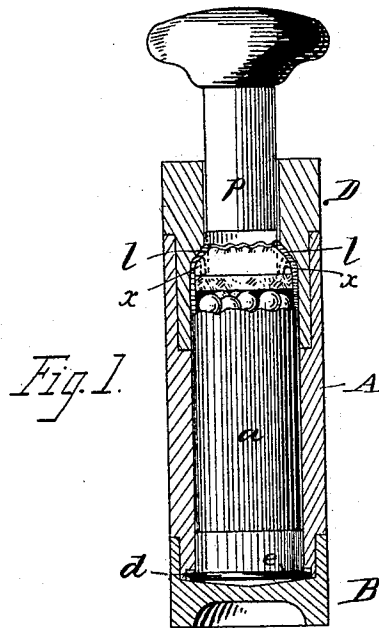
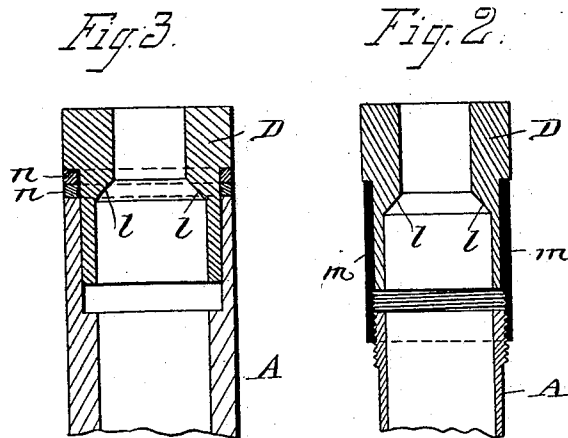
(No Model.)

C. C. CLIFFORD.

IMPLEMENT FOR LOADING AND RELOADING SHELLS.

No. 413,435.

Patented Oct. 22, 1889.



Witnesses

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UNITED STATES PATENT OFFICE.

CHARLES C. CLIFFORD, OF SPRINGFIELD, MASSACHUSETTS.

IMPLEMENT FOR LOADING AND RELOADING SHELLS.

SPECIFICATION forming part of Letters Patent No. 413,435, dated October 22, 1889.

Application filed January 21, 1889. Serial No. 296,987. (No model.)

To all whom it may concern:

Be it known that I, CHARLES C. CLIFFORD, a citizen of the United States, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Implements for Loading and Reloading Shells, of which the following is a specification.

This invention relates to implements for loading or reloading paper shells; and it comprises devices for inwardly deflecting the end portion of the shell and for crimping said end portion or bending it upon the inner wall of the shell against the wad for confining the latter against displacement, all as will hereinafter more fully appear and be set forth in the claims, reference being had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the views.

Figure 1 is a central longitudinal section of parts as employed in deflecting the end of the cartridge and crimping the end thereof. Figs. 2 and 3 are sectional views, in detail, of the crimping-head and chambered cylinder to be hereinafter referred to.

At all times in which the shell *a* is acted upon it is inclosed within the chambered cylinder A, open at one end, and at its other end is fitted a shell-retaining head B. The end wall of the internal chamber of said cylinder A is rabbeted, as at *d*, forming a seat upon which may be disposed the overlying bead *e* of the shell, the same when in place being bound against endwise movement between said seat and the shell-retaining head.

The crimping-head D consists of a ring adapted by its one end to fit the upper end of the chamber-cylinder, having its inner diameter for the lower portion thereof, when in place, the same size and a continuation of the bore of said cylinder; but the upper portion of said crimping-head has its bore inwardly and upwardly deflected, as shown at *l*. As the crimping-head is forced to its seat on the chamber-cylinder, its funnel-shaped wall, first by its wider portion, comes in contact with the end of the shell, forcing it inwardly, and when the full movement has been made by said head the inwardly-deflected end of the shell will lie within the circle covered by the

smaller diameter of the bore of the crimping-head, as shown in Fig. 1. By then employing a crimping-stick *p*, fitting the smaller bore of the crimping-head, the shell by its end portion may be lapped longitudinally and inwardly upon itself, as indicated by dotted lines at *x* in said Fig. 1, thereby confining the wad against displacement.

The parts to fit the one upon the other—to wit, the cylinder, shell-retaining head, and the crimping-head—are preferably formed at their engaging portions with rabbet-sockets and annular tongues to fit therein, as common for engaging parts in many interchangeable cylindrical devices.

To the end that the operative position of the funnel-shaped bore of the crimping-head may be made variable with relation to the shell when the crimping-head is moved to its greatest extent toward the head of the shell to effect the crimping, the abutment-seat on the cylinder A, for limiting the endwise movement of the crimping-head, may be formed as shown in Figs. 2 and 3, in the former of which views the cylinder is shown with a sleeve *m* to constitute its end portion, and by its screw-thread engagement with the main body of the cylinder it is adapted to be presented so as to limit the longitudinal movement of the crimping-head within the cylinder-chamber, and in Fig. 3 removable washers *n* are employed for the same purpose, and by the means substantially as latterly described various lengths of charges, as desired, may be placed in the shell, and yet the crimping or return-bending of the end portion of the shell will always correspond to the height of said charge.

What I claim as my invention is—

1. In a cartridge-shell-crimping implement, in combination, the chambered cylinder for receiving and holding the shell therein, the removable crimping-head consisting of a block adapted to fit and freely move longitudinally in the end of said chambered cylinder, provided with a funnel-shaped aperture opening to one end thereof, the largest transverse area of which aperture is as great as the transverse area of said cylinder-chamber, said aperture terminating in an opening of less diameter than that of said cylinder-chamber,

leading to the other end of said block, and the cylindrical crimping-stick adapted to be reciprocated through said reduced opening and within said crimping-head and cylinder-chamber and to lap the inwardly-deflected end portion of the shell in a return bend upon the inner wall of said shell, substantially as described.

2. In a cartridge-shell-crimping implement, in combination, the chambered cylinder for receiving and holding the shell therein, the removable crimping head consisting of a block adapted to fit and freely move longitudinally in the end of said chambered cylinder, provided with a funnel-shaped apertured opening to one end thereof, the largest transverse area of which aperture is as great as the transverse area of said cylinder-chamber, said aperture terminating in an opening of less diameter than that of said cylinder-chamber, leading to the other end of said block, means, substantially as described, whereby the said crimping-head may be adjusted longitudinally in and relative to said cylinder, and the cylindrical crimping-stick adapted to be reciprocated through said reduced opening and within said crimping-head and cylinder-cham-

ber and to lap the inwardly-deflected end portion of the shell in a return-bend upon the inner wall of said shell, substantially as described.

3. A shell-loading implement comprising the chambered cylinder A, the shell-retaining head fitting on and closing one end of said cylinder, the removable crimping-head consisting of a block adapted to fit and freely move longitudinally in the other end of said cylinder, provided with a funnel-shaped aperture the largest transverse area of which is as great as the transverse area of said cylinder-chamber, said aperture terminating in an opening leading to the other end of said block, of less diameter than that of said cylinder-chamber, and the crimping-stick adapted to be reciprocated through said reduced opening and within said crimping-head and cylinder-chamber and to lap the inwardly-deflected end portion of the shell in a return-bend upon the inner wall of the shell, substantially as described.

CHARLES C. CLIFFORD.

Witnesses:

WM. S. BELLOWES,
G. M. CHAMBERLAIN.