(No Model.)

F. P. DEVENS.

COMBINATION TOOL FOR LOADING CARTRIDGES.

No. 379,635. Patented Mar. 20, 1888.

Fig. 4

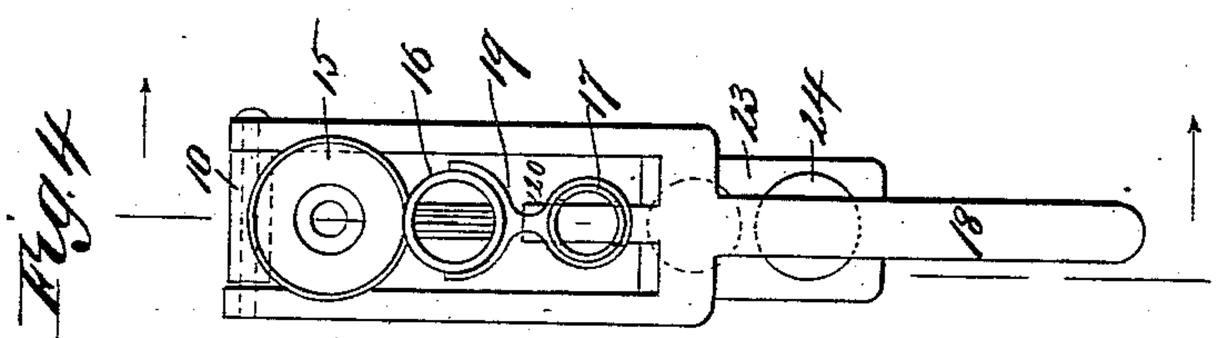

Fig. 3

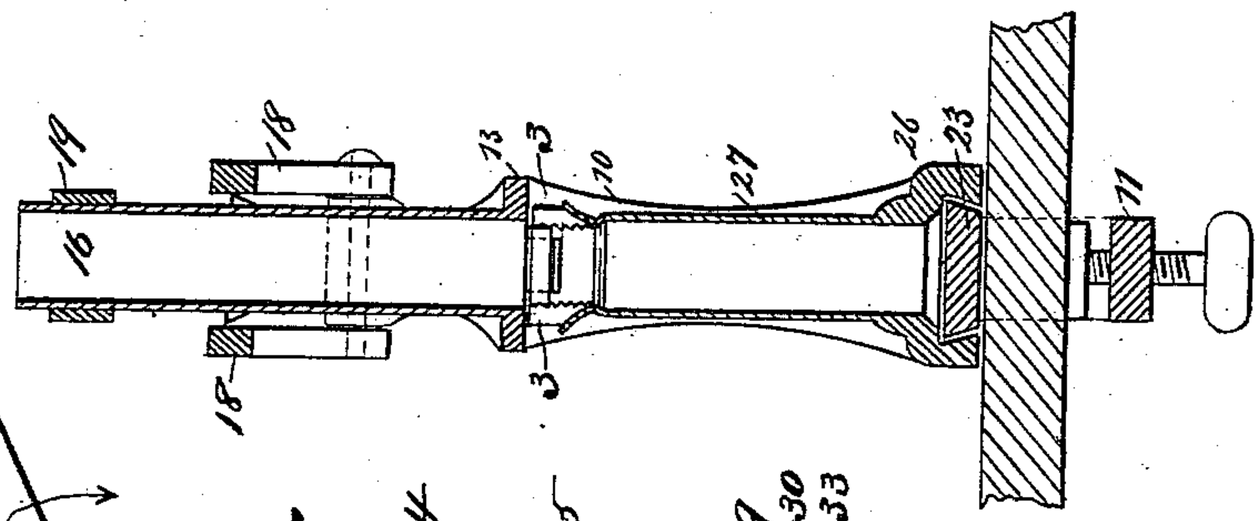

Fig. 5

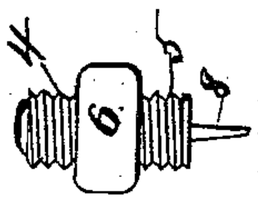

Fig. 6.

Fig. 2.

Fig. 1.

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FRANCIS P. DEVENS, OF KANSAS CITY, MISSOURI.

COMBINATION-TOOL FOR LOADING CARTRIDGES.

SPECIFICATION forming part of Letters Patent No. 379,635, dated March 20, 1888.

Application filed May 16, 1887. Serial No. 238,394. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS PORTER DEVENS, of Kansas City, in the county of Jackson and State of Missouri, have invented a new and Improved Combination-Tool for Loading Cartridges, of which the following is a full, clear, and exact description.

This invention relates to a combination-tool adapted for the loading of the ordinary form of paper-shell cartridge, the object of the invention being to provide a machine whereby the exploded primers may be removed from the shell and new primers applied, and whereby the shell may be loaded and crimped, all as will be hereinafter more fully described, and specifically pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a side view of my improved form of cartridge-loading machine, parts being shown in section. Fig. 2 is a central sectional elevation of the same, the parts being represented in the position they assume when the charge is being delivered to the cartridge. Fig. 3 is a cross-sectional elevation taken on line *x x* of Fig. 2. Fig. 4 is a plan view. Fig. 5 is a view of the attachment used for applying and removing the primers, and Fig. 6 is a plan view of the crimping-disk.

In the drawings above referred to I provide a main frame, which consists of a standard, 10, a clamping-jaw, 11, carrying a set-screw, 12, and a forwardly-extending arm or bracket, 13, which supports a funnel-like filler, 15, and a wad-tube, 16, the arm 13 being apertured to provide for the passage of a plunger, 17, the upper end of this plunger being guided by a bracket, 19, that is rigidly connected to the wad-tube 16.

To the standard 10 there is pivotally connected a bifurcated lever, 18, the arms of said lever extending forward upon each side of the upwardly-extending parts that are carried by the arm 13. This lever 18 is formed with a nose or projection, 20, which enters a slot, 21, that is formed in the plunger 17. Beneath the wad-tube 16 there is arranged a forwardly-extending tongue, 22, said tongue being at such distance below the under side of the arm or bracket 13 as to provide for the passage of a single wad from the tube 16.

The clamp 11 is formed with a forwardly-extending plate, 23, in which there are two apertures, 24 and 25, and the edges of this plate are inclined inward from the upper face of the plate in order that the plate may fit within a dovetail groove that is formed in the base 26 of a shell-tube, 27, said base being provided with a forwardly-extending projection, 28, that has a convex-faced recess, 29. A stop or limit pin, 2, which is carried by the plate 23, prevents the withdrawal of the tube 27. At each side of the tube 27 there are prongs 3, the approaching faces of which are serrated, said prongs being so spaced as to bear against a wad as the tube 27 is moved forward from beneath the filling-tube 15 to a point beneath the plunger 17.

The lower end of the plunger 17 is internally threaded, as shown at 7, this internal thread being formed in order that a capping and decapping device such as that shown in Fig. 5 may be attached to the plunger. This capping and decapping attachment consists of two externally-threaded projections, 4 and 5, which extend from either side of a collar, 6, the projection 4 being formed with a convex face, while the projection 5 carries a pin, 8, the arrangement being such that by bringing the projection 4 into engagement with the thread 7 of the plunger 17, and placing the base of the cartridge above the opening 25 and forcing down the plunger, by throwing the lever 18 in the direction of the arrow shown in connection therewith, an exploded primer may be removed from the anvil of the cartridge. Then if a new fresh primer is to be applied the projection 5 is brought into engagement with the screw-thread 7, the primer is adjusted to place, and the base of the cartridge is placed within the recess 25 of the plate 28, this plate being brought in line with the lower end of the plunger 17. Then if the plunger be depressed the primer will be forced to its seat upon the anvil of the cartridge.

In loading the cartridges they are passed up through the aperture 24 and into the tube 27. This tube is then moved back, so that its funnel-like upper end will be beneath the filler 15. A charge of powder is thrown into

the filler 15, the tube 27 is moved forward to a position directly above the opening 25, and in so moving forward the prongs 3 will carry the wad from engagement with the tongue 22, the pile of wads contained within the tube 16 being correspondingly lowered. After the tube 27 has been brought to position beneath the plunger 17 the lever is depressed and the wad is forced down upon the cartridge, and as the pressure is near the peripheral edge of the cartridge it follows that the cartridge will be pressed to place with an upper convex face, which, as is well known to sportsmen, is extremely desirable. If two wads are to be placed on top of the powder, the tube 27 is returned toward the standard 10 and once more drawn forward, and the operation of forcing the wad home is repeated. After the powder has been thoroughly pressed to place, the shot is introduced through the tube 15, and the tube 27 is again pulled forward, taking a third or second wad, as the case may be, which last wad is forced to place in the manner hereinbefore described, the shells being at this time in condition for crimping.

The crimper illustrated in the drawings consists of a block, 30, that is mounted upon a short shaft, 31, said shaft being supported in bearings formed upon the clamp 11, so that the upper face of the block will be directly beneath the opening 25, the shaft 31 being provided with a crank-arm, 32. In the upper face of the block 30 there is formed an annular groove, 33, the lower defining edge of which is formed with a number of cam-faces, as 9, while the inner wall of the groove is not as high as the upper wall, as illustrated.

When the cartridges, loaded as above described, are to be crimped, I provide a claw, 35, which is formed with a shank, 36, that is adapted to engage with the thread of the plunger 17, the arrangement being such that when the projection of the claw is brought into engagement with said thread and the base of the cartridge brought into engagement with the claw the open end of the cartridge may be depressed, so that the shell will enter the groove 33, and if at this time a slight downward pressure be applied to the lever 18 and the block 30 be rotated by turning its crank-arm 32 the edge of the shell will be turned over and properly crimped.

From the above description it will be seen that the implement forming the subject-matter of this application may be used as a loader, a capper and decapper, and as a crimper, and in practice it will be found that all of the several operations hereinbefore set forth may be carried on not only with great facility, but to the entire satisfaction of the operator.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. In a cartridge-loader, the combination, with the wad-tube and a tongue just below its lower end, to support the wads and yet allow of their removal, of the movable shell-holder provided with an attachment to engage the wad next to the said tongue and remove it therefrom, substantially as set forth.

2. In a cartridge-loader, the combination, with the wad-tube having a tongue, 22, just below its lower end, of the movable shell-holder 27 under said tube, and provided at opposite sides of its upper end with upward-projecting prongs, to engage the lower wad at opposite sides of the tongue and remove it therefrom, substantially as set forth.

3. In a cartridge-loader, the combination, with the wad-tube 16 and its tongue 22, of the sliding shell-holder 27 below said tube, the upward-projecting wad-receiving prongs 3 on the upper end of said holder, and the forwardly-extending projection 28, having a recess, 29, in its upper face, substantially as set forth.

4. A cartridge-loader comprising the standard 10, the clamp 11, the dovetail plate or extension 23, having a shell-aperture, 24, near its forward end, the vertical shell-tube 27, having a base, 26, provided with a dovetail groove receiving said plate, and prongs upon its upper end, the standard 10, the bracket 13, above the shell-tube and provided with the vertical filling-tube 15, the wad-tube in front thereof provided with the wad-supporting tongue 22, to hold the lower wad in the path of the said prongs, and a plunger-aperture at its outer end, the vertically-reciprocating plunger beneath, and in alignment with which said holder may be moved with the wad held in its prongs, substantially as set forth.

5. A cartridge loader and reamer comprising the clamp 11, standard 10, horizontal bracket 13, and plate 23, having shell-receiving apertures 24 25, the sliding shell-holder 27, the vertical filling-tube 15 on the inner end of the bracket, the wad-holding tube in front of the filler, the vertically-reciprocating plunger 17 on the outer end of the bracket in vertical alignment with the aperture 26, and provided with claws for holding the shell-flange, and the crimper 30, journaled below and in alignment with the aperture 25, substantially as set forth.

6. In a cartridge loader and crimper, the combination, with the frame having a laterally-projecting plate or arm formed or secured integrally therewith and apertured to receive a shell, of a vertically-reciprocating ramming-plunger in line with said aperture and having shell-holding claws, and the horizontally-revoluble reamer or crimper journaled permanently on the frame adjacent to the lower side of the shell-receiving aperture, whereby the open end of a shell may be inserted downward through said aperture upon the reamer or crimper, and held by claws on the ramming-plunger while the said reamer or crimper is being revolved, substantially as set forth.

7. In an implement for loading, reaming, capping, and decapping cartridges, a ramming-plunger provided with threaded sockets in its opposite ends, the claw 35, provided

with the threaded shank 36, engaging one of said sockets, and the combined capping and decapping attachment, comprising the collar 6, threaded convex-faced projection 4, and threaded projection 5, provided with the pin 8, substantially as set forth.

8. The herein-described capping and decapping attachment, comprising the collar 6 and threaded projections 4 and 5 at opposite sides thereof, one of said projections having a convex capping-face and the other a decapping-pin, 8, substantially as set forth.

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Witnesses:
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