(No Model.) 2 Sheets—Sheet 1.

A. VELTEN & C. J. ROSE.

DEVICE FOR CAPPING AND RECAPPING CARTRIDGE SHELLS.

No. 496,143. Patented Apr. 25, 1893.

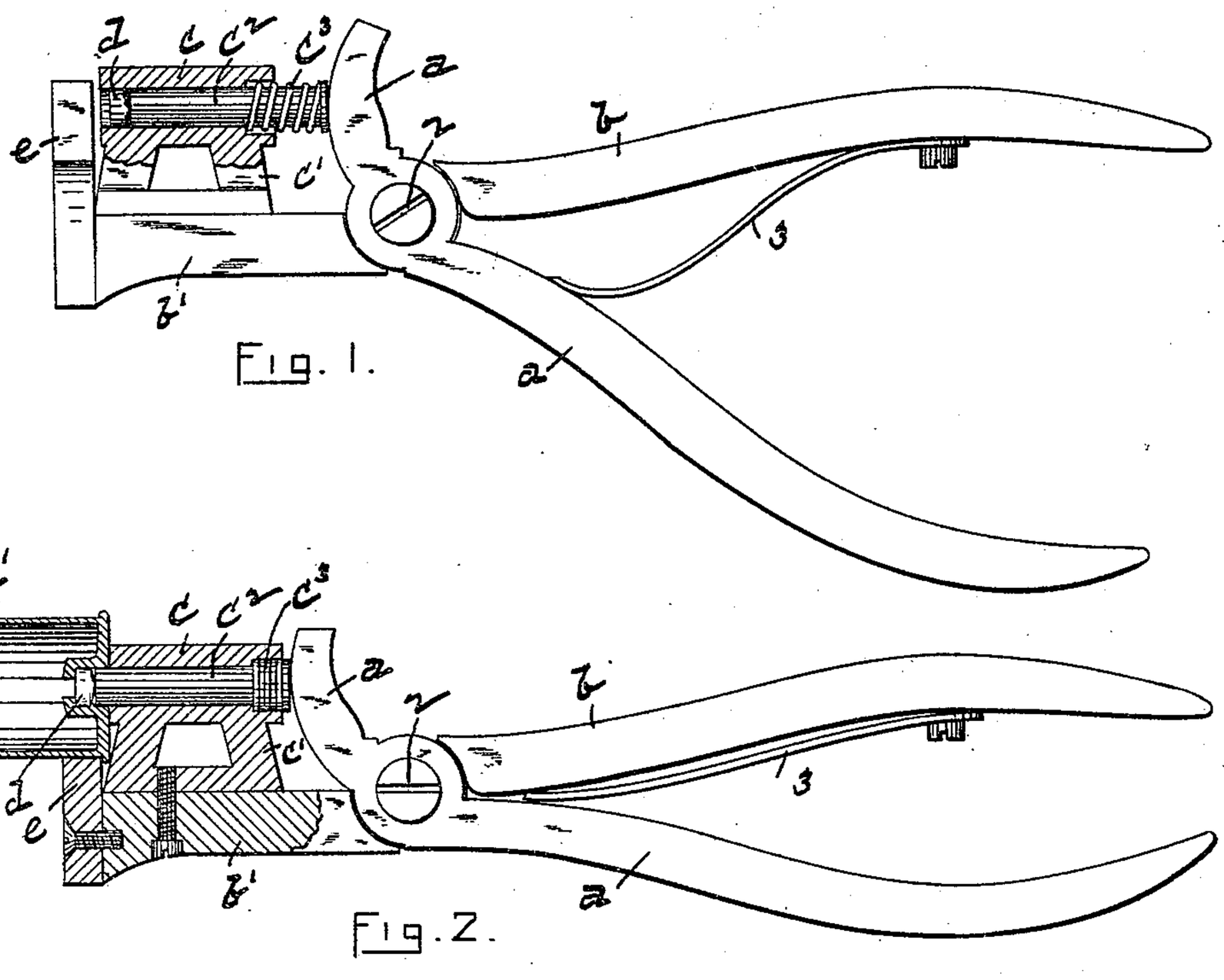

Fig. 1.

Fig. 2.

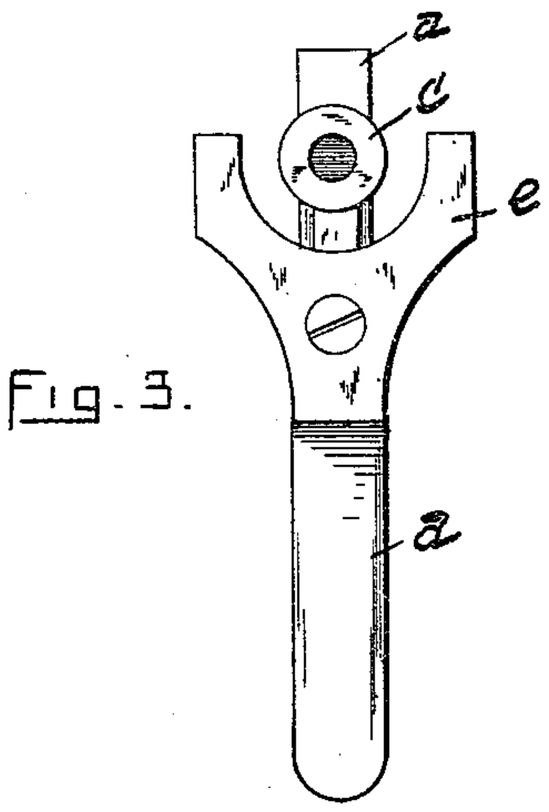

Fig. 3.

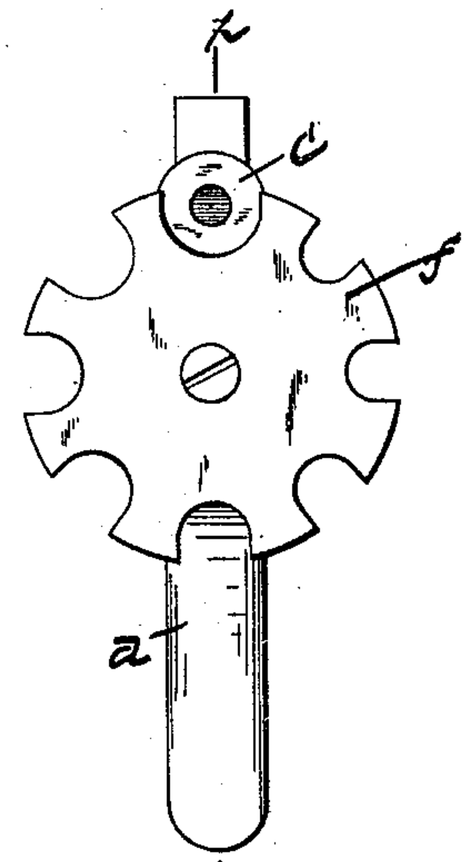

Fig. 4.

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(No Model.) 2 Sheets—Sheet 2.

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DEVICE FOR CAPPING AND RECAPPING CARTRIDGE SHELLS.

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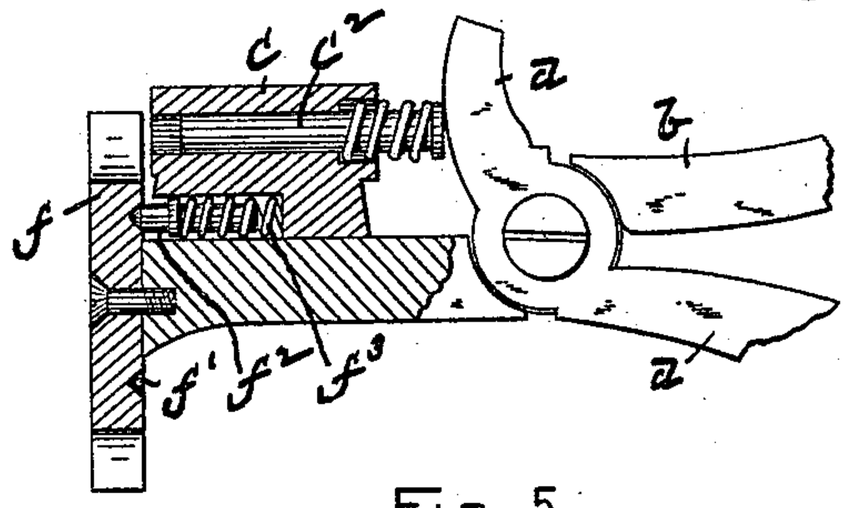

Fig. 5.

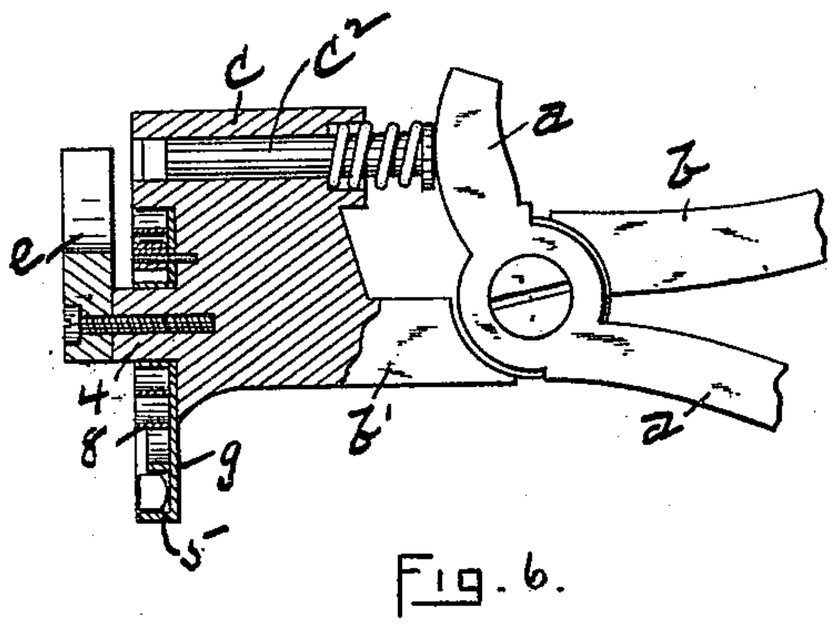

Fig. 6.

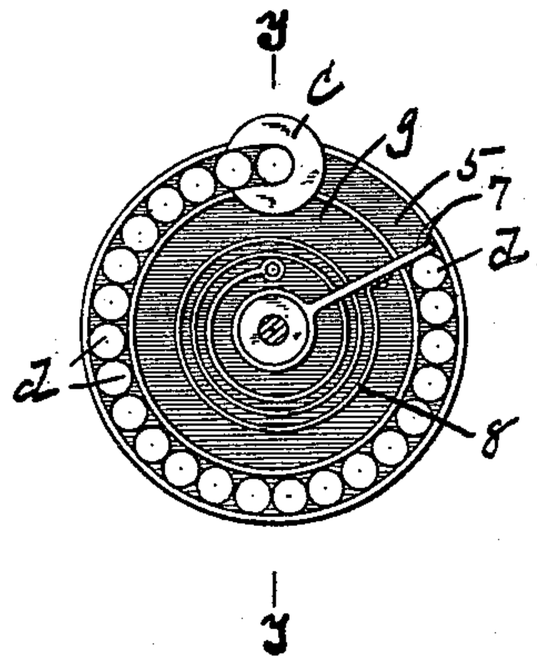

Fig. 7.

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UNITED STATES PATENT OFFICE.

AUGUSTUS VELTEN AND CHARLES J. ROSE, OF CHICOPEE, MASSACHUSETTS.

DEVICE FOR CAPPING AND RECAPPING CARTRIDGE-SHELLS.

SPECIFICATION forming part of Letters Patent No. 496,143, dated April 25, 1893.

Application filed August 3, 1892. Serial No. 442,082. (No model.)

To all whom it may concern:

Be it known that we, AUGUSTUS VELTEN and CHARLES J. ROSE, citizens of the United States, residing at Chicopee, in the county of Hampden and State of Massachusetts, have invented a new and useful Improvement in Devices for Capping and Recapping Cartridge-Shells, of which the following is a specification, reference being had to the accompanying drawings, forming part thereof.

The object of our invention is to provide a tool or implement by the use of which caps can be seated in the heads of center-fire cartridge-shells quickly, easily, and with perfect accuracy, and without deflecting said head from its normal plane.

To this end, our invention consists in the tool constructed and operating as hereinafter fully described and particularly pointed out in the claims.

Referring to the drawings, in which like letters and numerals designate like parts in the several views, Figure 1 is a side view, partly in vertical section, of a tool embodying the invention, the plunger being shown in its retracted position, and a cap being inserted within the barrel ready to be applied to a shell. Fig. 2 is a similar view showing the position of the parts after the cap has been seated in the head of a shell. Fig. 3 is an end view of the tool, looking toward the right in Fig. 1. Fig. 4 is a similar view showing the tool equipped with means for holding and capping shells of varying calibers. Fig. 5 is a vertical section taken at line x—x of Fig. 4. Fig. 6 is a vertical section, taken at line y—y of Fig. 7, showing the tool equipped with a magazine attachment for holding a plurality of caps and feeding them, one at a time, to the barrel and plunger. Fig. 7 is an end view thereof.

The letters a and b designate two hand-levers, pivotally connected together near their front ends, as at 2, and having their rear ends pressed in opposite directions by a spring 3. In front of the pivot 2 the lever b is extended to form the head b' the upper face of which, as shown in Figs. 1 and 2, is in substantial alignment with the center of said pivot 2. Upon the upper face of said head b' is secured the barrel c, having a suitable base c', the bore of which barrel is of a diameter but slightly greater than that of the usual fulminate cap d, whereby said bore is adapted to receive such cap and direct it squarely to the orifice in the shell, as will be presently described. Within the bore of said barrel is located a plunger c^2, which is of slightly greater length than the barrel and is normally retained with its rear end projecting beyond the rear end of the latter by a spring c^3, to receive which the rear end of the barrel is counter-bored, as shown in Figs. 1 and 2. The lever a has its front end turned upwardly and the front edge of said turned up portion is formed upon the arc of a circle which is eccentric to the pivotal center of said lever, whereby, when the rear end of the lever is moved toward lever b, said curved edge is adapted to act as a wiper-cam against the rear end of plunger c^2 to advance the latter within barrel c, in opposition to the stress of spring c^3. At the front end of the head b' is located an upwardly projecting yoke e provided with a semi-circular recess to receive the shell d', as shown in Fig. 2. The recess in said yoke is of the same radius as the circumference of the shell which it is designed to hold, and the yoke is so situated with respect to the barrel c that the central orifice in the head of a shell placed within the former will register with the bore of the latter. The shell so placed within the yoke is rigidly held against longitudinal movement by the central portion of its head, which bears against the front end of barrel c, and by the projecting periphery of its head, which bears against the rear side of the yoke adjacent to the edge of the recess in the latter. It will be obvious, therefore, that a cap placed in the bore of the barrel in front of plunger c^2 will, by the forward movement of the plunger when lever a is operated, be forced into the central orifice in the head of the shell so supported within the yoke, with entire accuracy, and that, because of the powerful leverage secured by the wiper action of lever a upon the plunger, such operation can be performed very quickly and with but slight effort on the part of the operator. After so seating a cap, the spring 3 restores lever a to its former position and spring c^3 retracts the plunger, and the tool is ready for seating a second cap. By reason of the accurate register of the head of the shell with barrel c secured by

the yoke *e*, the cap infallibly enters the orifice in the shell without exerting any undue pressure against said head, and inward deflection of the head to interfere with the proper firing action of the shell when placed in a gun or pistol, is rendered impossible. This result is still further insured by providing the plunger c^2 at its rear end with a slightly enlarged head as shown, which head by coming in contact with the rear end of the barrel limits the forward movement of the plunger when the cap has reached the bottom of its seat in the shell, at which time also the lever *a* reaches the end of its movement toward lever *b*.

To adapt the same tool to be used for capping and re-capping shells of varying calibers, we prefer to detachably connect the yoke *e* to the head *b'*, by a screw or screws as shown or in any convenient manner, and to provide extra yokes corresponding to the sizes of the various shells, which can be applied to the tool interchangeably, each yoke being constructed to properly center its particular shell relatively to barrel *c* when secured to the end of said head *b'*. The range of usefulness of a single tool is thus greatly increased at but a slight additional cost. In Figs. 4 and 5 I have shown a slightly modified form of means for securing the same result, in which a disk *f*, having in its periphery a series of recesses corresponding in size to the different sizes of shells used, is centrally mounted upon the head *b'*, by revolving which either of said recesses can be moved into register with barrel *c*. In the rear face of said disk is located a series of depressions *f'*, each of which is in radial alignment with the center of one of said recesses, and a pin f^2 located within a socket in the base of barrel *c* has its outer, pointed end pressed against the disk by a spring f^3, whereby said pin is adapted to successively enter said depressions *f'* as they are brought opposite thereto, and retain the corresponding recess in register with the barrel, while, by grasping the disk, it can be turned in either direction, the conical point of the pin being forced out of the depression into which it projects, by such movement. Said disk-holder is especially designed for use in capping or re-capping the smaller sizes of shells used in rifles, &c. For the larger shells, the interchangeable yokes *e* will preferably be used.

With a view to facilitating a very rapid operation of the tool in capping or re-capping shells, we have devised a magazine attachment thereto, adapted to hold and deliver, one at a time, to the barrel *c* a plurality of caps, and thereby obviate the necessity of manually placing a cap in said barrel at each operation. Such attachment is illustrated in Figs. 6 and 7, and comprises a circular plate *g* centrally mounted upon a hub 4 at the front end of head *b'*, said plate having formed on its front face an annular way 5 the width of which corresponds substantially with the diameter of the bore of barrel *c*, and which at one end communicates with said bore at the front end of the barrel, through a slot or opening in the wall of the latter as shown in Fig. 7. The inner side-wall of the way 5 is of less width than the outer wall, thereby permitting the outer end of a finger 7 to project over the outer edge of said inner wall into said way. Said finger is pivotally mounted at its inner end at the center of said plate *g* and its outer end is constantly pressed toward that side of barrel *c* at which the way 5 communicates with the bore of the latter by a spring 8 coiled about the center of the plate and connected at one end to the latter and at its opposite end to the finger. In this manner a magazine capable of holding a large number of caps without occupying much space is secured. The caps being inserted in the way 5 in front of finger 7, the latter being first retracted as far as possible, until they completely fill the way 5, will be acted upon by the finger in such manner that, as fast as a cap is seated in a shell and the plunger c^2 retracted, the next succeeding cap in the line will be pressed into the bore of the barrel, in front of the plunger, and this automatic feed of the caps will continue until the magazine is exhausted, when it can be quickly refilled. The operator, therefore, has to simply place the shells in the yoke *e* and remove them therefrom, with one hand, and work lever *a* with the other hand, and is enabled to cap a large number of shells in a very short time.

It is obvious that modifications in the form of the magazine and in the automatic feeding mechanism thereof can be made within the spirit of our invention.

While we have shown and described the device devised by us as a tool adapted to be readily carried with the other tools usually found in a sportsman's outfit, it will be understood that the head *b'* can, if desired, be provided with means whereby it can be secured to a bench or other support and the tool used as a fixture.

Having thus fully described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In a device for capping and re-capping cartridge-shells, two levers pivotally connected together between their ends, one of said levers carrying at its front end a barrel adapted to receive a cap, a plunger fitted to the bore of said barrel and adapted for longitudinal movement therein, and a yoke for supporting a shell at the front end of said barrel, and the other of said levers terminating at its front end in a turned up portion having a curved edge which is eccentric to the pivotal center of said lever and which bears against the rear end of said plunger, combined and operating substantially as set forth.

2. In a device for capping and re-capping shells, a barrel having a bore the diameter of which corresponds substantially with that of the cap, a plunger movable within the bore

of said barrel, a spring normally retaining said plunger in a retracted position, a yoke for supporting a shell at the front end of the barrel, and a hand-lever terminating at one end in a wiper-cam which engages the rear end of said plunger to advance the latter within the barrel, combined and operating substantially as described.

3. In a device for capping and re-capping shells, two hand-levers pivotally connected together between their ends, one of said levers terminating in front of the pivot-joint in a supporting head, said head having mounted thereon a cap-receiving barrel provided with a longitudinally movable plunger and having detachably secured to its front end a yoke adapted to support a shell in axial alignment with said barrel, and the other of said levers terminating at its front end in a turned-up portion having a cam-shaped outer edge, which engages the rear end of said plunger, combined and operating substantially as described.

4. In a device for capping and re-capping shells, a hand-lever terminating at its front end in a supporting head, a cap-receiving barrel mounted upon said head, a plunger longitudinally movable within the bore of said barrel and having a length slightly greater than the latter, a spring normally retaining said plunger in a retracted position to enable a cap to be inserted in the barrel in front thereof, means substantially as described for holding shells of varying sizes in front of said barrel and in axial alignment with said plunger, and a second hand-lever pivotally connected to said first mentioned lever in rear of said supporting head and terminating at its front end in an upturned portion adapted to engage the rear end of said plunger to advance the latter within the barrel, combined and operating substantially as set forth.

5. In a device for capping and re-capping shells, the combination with two pivotally connected hand-levers, one of which carries a cap-receiving barrel and plunger and a yoke for supporting a shell in axial alignment with said barrel, and the other of which engages the rear end of said plunger in such manner as to advance it within the barrel, of a magazine for holding a plurality of caps and provided with a way leading therefrom to the bore of said barrel, and means substantially as described for feeding the caps placed in said magazine through said way to the barrel, substantially as set forth.

6. In a device for capping and re-capping shells, the combination with a cap-receiving barrel, a plunger longitudinally movable within said barrel, and means for supporting a shell in axial alignment with said barrel, of a manually-operated, cam-shaped lever engaging the rear end of said plunger for advancing the latter within the barrel and a spring for moving the plunger in the opposite direction, a magazine for holding a plurality of caps, a way leading from said magazine to the bore of said barrel at or near the front end of the latter, and means substantially as described for automatically feeding the caps through said way to the barrel, arranged and operating substantially in the manner set forth.

7. In a device for capping and re-capping shells, the combination with the barrel, its plunger, the operating lever for the latter, and the holder for a shell, of a magazine for holding a plurality of caps, comprising a circular way terminating at one end in the bore of said barrel, a finger pivotally supported at its inner end and having its outer end projecting radially within said way, and a spring pressing said finger toward that end of said way which communicates with the bore of the barrel, substantially as set forth.

8. In a device for capping and re-capping shells, lever b terminating at its front end in head b', barrel c mounted upon said head, plunger c^2, spring c^3, yoke e detachably secured to said head at its front end, and lever a pivotally connected to said lever b and terminating at its front end in an upwardly turned portion having a cam-shaped edge which engages the rear end of said plunger, substantially as described.

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