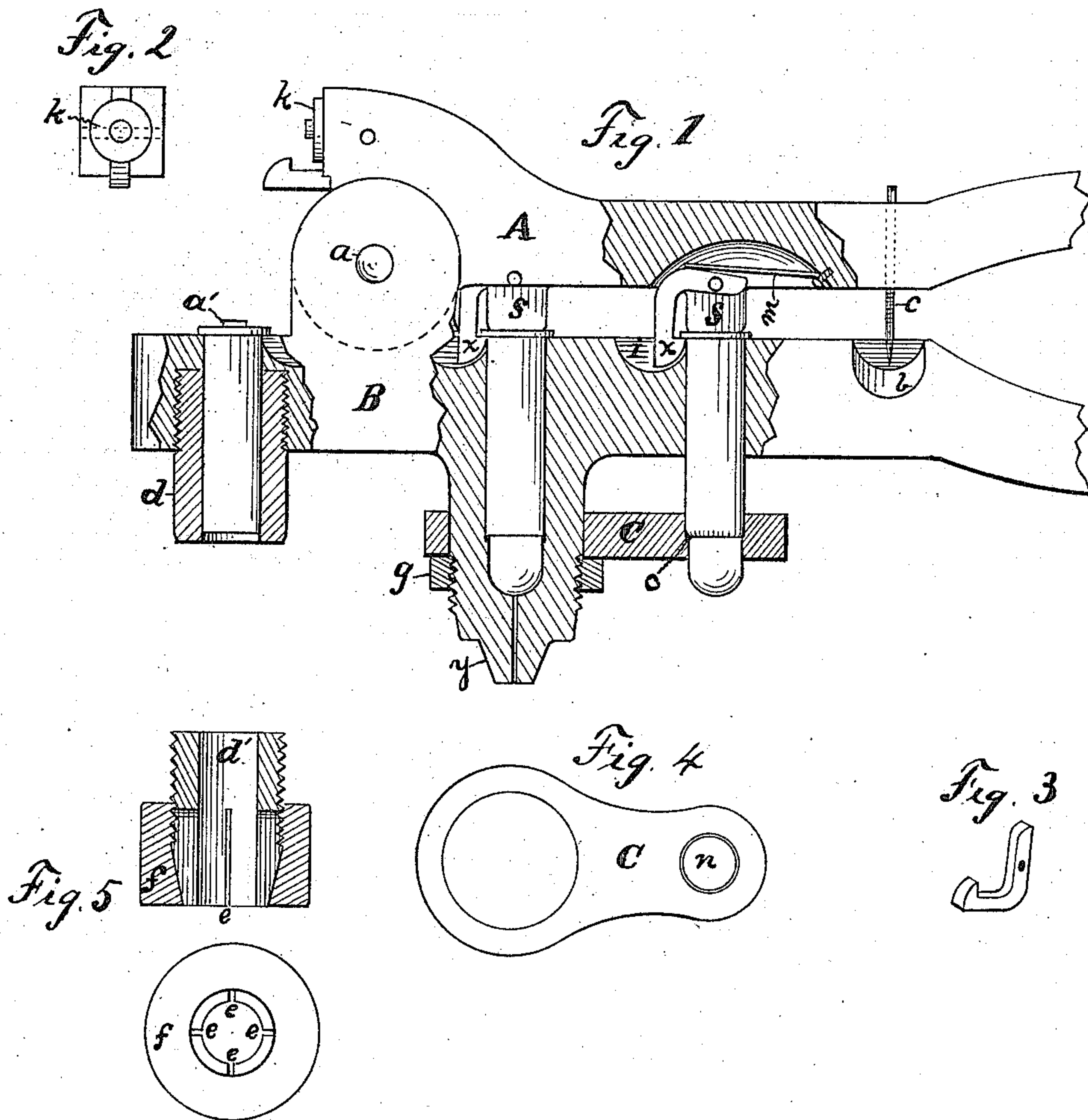


(No Model.)

J. H. BARLOW.
CARTRIDGE IMPLEMENT.

No. 294,955.

Patented Mar. 11, 1884.



WITNESSES:

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JOHN H. BARLOW, OF NEW HAVEN, CONNECTICUT.

CARTRIDGE IMPLEMENT.

SPECIFICATION forming part of Letters Patent No. 294,955, dated March 11, 1884.

Application filed January 5, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. BARLOW, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Cartridge-Reloading Implements, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

10 Figure 1 is a side elevation of my improved reloading implement, partly in section. The ends of the levers which serve as handles are represented as broken off to bring the view within the margin. Fig. 2 is a plan of the end of that portion of the upper lever which operates, in conjunction with other parts hereinafter described, as a recapper and shell-reducer. Fig. 3 is a perspective view of one of the movable latches which serve as extractors. 15 Fig. 4 is a plan of the adjustable crimping-plate. Fig. 5 is a vertical section, together with an end view of a modification of the shell-reducing chamber, more fully explained hereinafter.

25 My invention relates to improvements in an implement or tool used for reloading central-fire metallic cartridges after the same have been discharged.

30 In the manufacture of central-fire metallic cartridges great care is exercised to obtain a uniformity and exactness in the sizes of the several parts which constitute the cartridge, which is accomplished by special machinery and tools adapted to that purpose, special attention being given to sizing that part of the cartridge-shell into which the bullet is afterward secured. This operation of sizing the shells—called “reducing”—is a distinct one by itself, and is a vital element in the construction of accurate-shooting cartridges. Again, 40 cartridges, when new, do not fit the chamber of the gun closely, to facilitate placing them in the chamber readily. Consequently, when the cartridge is discharged, the shell is immediately expanded, filling the chamber in the gun. The extent of this expansion of shell varies with different make of guns, some makers allowing more and some less space in the chamber; but there is sufficient in all to make the shell too large for the bullet; therefore it becomes necessary to reduce or resize 50

the ball end of the shell before a new charge of powder and bullet is placed in the shell, to produce a reloaded cartridge having that degree of accuracy which characterizes a factory-loaded cartridge. 55

In reloading implements made prior to this invention the operation of reducing the cartridge-shell to its former “ball size” was either dispensed with altogether or attempted to be done in the same chamber and at the same time when the powder and bullet were being pressed into their respective positions; but as the material composing the bullet is non-elastic and the cartridge-shell made of a material containing considerable elasticity, it will be apparent that the shell could not be reduced in this manner, and at the same time secure the bullet firmly in the shell, as the elastic shell, upon being removed from the reloading-chamber, would expand sufficiently to make the bullet loose, because the bullet, being non-elastic, would remain at the minimum point of compression. It is often desirable to have these cartridges loaded to a uniform length. In order to do this, reloaders have been constructed heretofore so as to use the chamber in which the recapping was performed to crimp the end of the shell upon the bullet—an operation attendant with many hazardous risks, 60 as the same pin or stud used to insert a primer in the shell must be used to deliver the heavy pressure necessary to turn or crimp the end of the shell, and this is performed after the cartridge is loaded, placing the operator in danger from premature explosion of the cartridge. 65 70 75 80 85

In reloading implements made hitherto, various devices have been employed to extract the cartridge from the reloading-chambers, none of which will permit the operator to regain a hold upon the cartridge should it be dropped back into the chamber or be accidentally pressed into the same otherwise than by the use of the levers. 90 95

The design of this invention is to provide a cartridge-reloading implement which shall enable the operator to restore the expanded cartridge-shell to its former size—especially that part into which the bullet is secured—before proceeding to reload the same, thereby acquiring the same degree of accuracy in the re- 100

loaded cartridge which characterizes the factory-loaded cartridge; also, to obviate some of the dangerous operations connected with the use of reloaders as constructed heretofore; also, to facilitate the removal of the cartridges from the reloading-chambers in the implement; and to this end it consists in a cartridge-reloading implement having two levers hinged together, one of which is provided with a separate chamber for resizing or reducing that part of the shell into which the bullet is to be secured, substantially as and for the purpose hereinafter described.

It consists, further, in a cartridge-reloading implement having two levers hinged together, one of which is provided with a shell-reducing chamber, which is adapted to be used in conjunction with the other lever for recapping the cartridge-shells, substantially as and for the purpose hereinafter specified.

It consists, further, in a cartridge-reloading implement having two levers hinged together, one of which is provided with suitable chambers for reloading the shells, and the other being provided with one or more movable latches, substantially as and for the purpose hereinafter shown and described.

It consists, finally, in the construction and arrangement of the parts, substantially as and for the purpose hereinafter shown and described.

Letters of like name and kind refer to like parts in each of the figures.

To construct my improved reloader, two strong levers, A and B, are pivoted or hinged together at *a*, as represented in Fig. 1. The lever B is provided with a recess, *b*, opposite to which, in the lever A, is arranged the sharp-pointed pin *c*, which are used in connection with each other for removing the old cap from the shell. This device, being old, needs no further description. The lever B has a cylindrical projection on its lower side, which is chambered from the top, the internal diameter of which is the same as the external diameter of the cartridge, having the bottom of the chamber made to correspond with the shape of the end of the bullet. This chamber is used for pressing the loaded cartridge to the required length, and is an old device also. B is also provided with an extension at the left of the hinge-joint *a*, into which is secured a suitable chamber for resizing or reducing the ball size of the cartridge-shells. I have shown this reducing-chamber as consisting of separate piece *d*, having a tubular form, and attached to the lever B by means of a screw-thread. I do not confine myself to the use of a detachable reducing-chamber, as it might be made in the lever B itself. Neither do I confine myself to the use of a solid unchangeable form of chamber for reducing the shells, for it is many times desirable to have a means of adjusting the size of the reducing-chamber, in which case the form illustrated by Fig. 5 would be preferable, in which the re-

ducing-chamber *d'* is provided with longitudinal slots *e* extending nearly the entire length of the chamber, to enable the ends being closed together by the outside nut, *f*, operating upon the tapered end of chamber *d'*. The cylindrical projection on the lower side of the lever B is provided with a screw-thread which is fitted with the nut *g* which supports and provides a means for adjusting the crimping-plate C in a vertical plane. The plate C being free, it will readily adjust itself radially. The crimping-plate C contains an aperture, *n*, having a shoulder on its internal surface, as at *o* in Fig. 1, for turning or crimping the end of the cartridge-shell upon the bullet for the purpose of securing the bullet in position firmly. When the cartridge is discharged, this crimped end of the shell does not straighten, and I have shown the extreme end of this projection on lever B as having the form of an inverted frustum, *y*, in section, which is to be used in straightening the crimped mouth of the shell. The lever A has suitable bosses, *s* and *s*, corresponding with the diameter of the cartridge-head. Through these bosses *s* and *s*, and longitudinally with the lever A, a narrow slot is cut, in which the movable latches *x* and *x* and their respective springs are adapted to operate. By reference to Fig. 1, it will be seen that the latch-hooks *x* and *x* are journaled upon pins located in the lever A in a vertical line over the center of the opposite chambers in lever B. This arrangement of the movable latches *x x* causes them to draw more closely under the cartridge-head whenever the levers are operated to extract the shell, also retaining hold of the cartridge until it is raised nearly out of the chamber. The top of the latch-hook *x*, upon which the spring *m* operates, being made flat, the spring *m* holds the latch-hook *x* in proper position, when not under the cartridge-head, as shown, to strike the shell when the levers A and B are closed together and spring over the edge of the head, small slots *i* in the lever B permitting the movable latch *x* to pass beneath the head of the shell, as shown in Fig. 1. *k* is a button having a small circular projection in the center, and inserted in the end of the lever A, and used in pressing the shells into the reducing-chamber *d*, also for inserting the primer *a'* into the pocket in the end of the shell. Another movable latch similar to and arranged to operate in the same manner as *x x*, already described, is placed in the end of the lever A for the purpose of withdrawing the shell from the reducing-chamber *d*.

When the parts are constructed and arranged in the positions shown in Fig. 1, the implement is used as follows, viz: The frustum-point *y* on lever B is forced into the mouth of the cartridge-shell, whereby the crimped end is straightened. The shell is then inserted into the reducing-chamber *d* and forced "home" by opening the levers A and B. The shell thus reduced is withdrawn from the chamber

5 *d* by closing the levers together, with the
 movable latch arranged in the end of lever A.
 The shell being again inserted in chamber *d*,
 the primer *a'* is pressed into the pocket in end
 10 of shell with the central projection of the but-
 ton *k* by opening levers A and B, as before.
 The cartridge-shell is then ready for charging
 with suitable ammunition, after which it is
 15 placed in the chamber located in the solid pro-
 jection of the lever B, where the powder is
 compressed and the bullet entered into the
 shell the proper length by closing the levers
 A and B together. As the cartridge thus
 20 loaded has to be passed into another chamber
 or other suitable device for crimping the end
 of the shell, it is quite essential that the bullet
 should not be moved out of the shell by the
 expansion of the compressed powder within,
 which is invariably the case if the shell is not
 25 resized before loading. By means of the nut
g, the crimp-plate C is adapted to be moved
 vertically upon the external surface of the
 loading-chamber to adjust the crimping-shoulder
o to suit different lengths of shells. This
 30 crimp-plate C also has a radial movement
 about this chamber, by which means it is en-
 abled to be centered accurately when pressing
 the cartridge into the crimping-aperture *n*,
 thereby insuring a very even and accurate
 35 "crimp," which adds greatly to the qualities
 of the cartridge. The cartridge is extracted
 from the loading and crimping chambers by
 the movable latches *x* and *x*. The longitudi-
 nal slots through the bosses *s* and *s* are located
 40 in the center, thereby removing any liability
 of pressure upon the cap or primer in the
 shell while in the act of pressing the powder
 or that of crimping the end of the loaded car-
 tridge-shell.

40 Having described my invention, what I
 claim as new, and desire to secure by Letters
 Patent, is—

45 1. The combination, in a cartridge-reload-
 ing implement, of the two levers A and B,
 hinged together, one of said levers being pro-
 vided with a suitable loading-chamber, also a
 separate chamber, *d*, which is adapted to be

used, in connection with the lever A, as a
 shell reducer and recapper, the other lever
 being provided with a suitable device for with- 50
 drawing the cartridge from the chambers, sub-
 stantially as and for the purpose described.

2. The combination, in a cartridge-reload-
 ing implement, of the two levers A and B,
 hinged together, one of said levers being pro- 55
 vided with suitable loading-chambers, the
 other lever having one or more movable latches
 adapted to pass under the rim of the cartridge-
 head when the cartridge is seated in the load-
 ing-chambers, engaging therewith to with- 60
 draw the same from the loading-chambers, as
 set forth.

3. The combination, in a cartridge-reload-
 ing implement, of the two levers A and B,
 hinged together, one of said levers having suit- 65
 able devices for extracting the cartridge from
 the chambers, the other lever being provided
 with loading-chambers, together with the taper
 projection *y*, for expanding the mouth of the
 shell, substantially as described. 70

4. The combination, in a cartridge-reload-
 ing implement, of the lever A, provided with
 the movable latches *x x*, for the purpose de-
 scribed, the lever B, provided with a loading-
 chamber, a separate chamber, *d*, arranged to 75
 operate as a shell reducer and recapper, also
 an aperture for crimping the loaded cartridge,
 arranged to operate in connection with the
 radially-adjustable crimp-plate C, substan-
 tially as set forth. 80

5. The combination, in a cartridge-reload-
 ing implement, of the shell-expander *y*, re-
 ducing-chamber *d*, radially-adjustable crimp-
 plate C, movable latches *x x*, together with the
 hinged levers A B, having suitable loading- 85
 chamber, all arranged to operate substantially
 as and for the purpose shown and described.

In testimony whereof I affix my signature in
 presence of two witnesses.

JOHN H. BARLOW.

Witnesses:

LOUIS J. DAY,
 E. N. ALLING.