

Nov. 6, 1934.

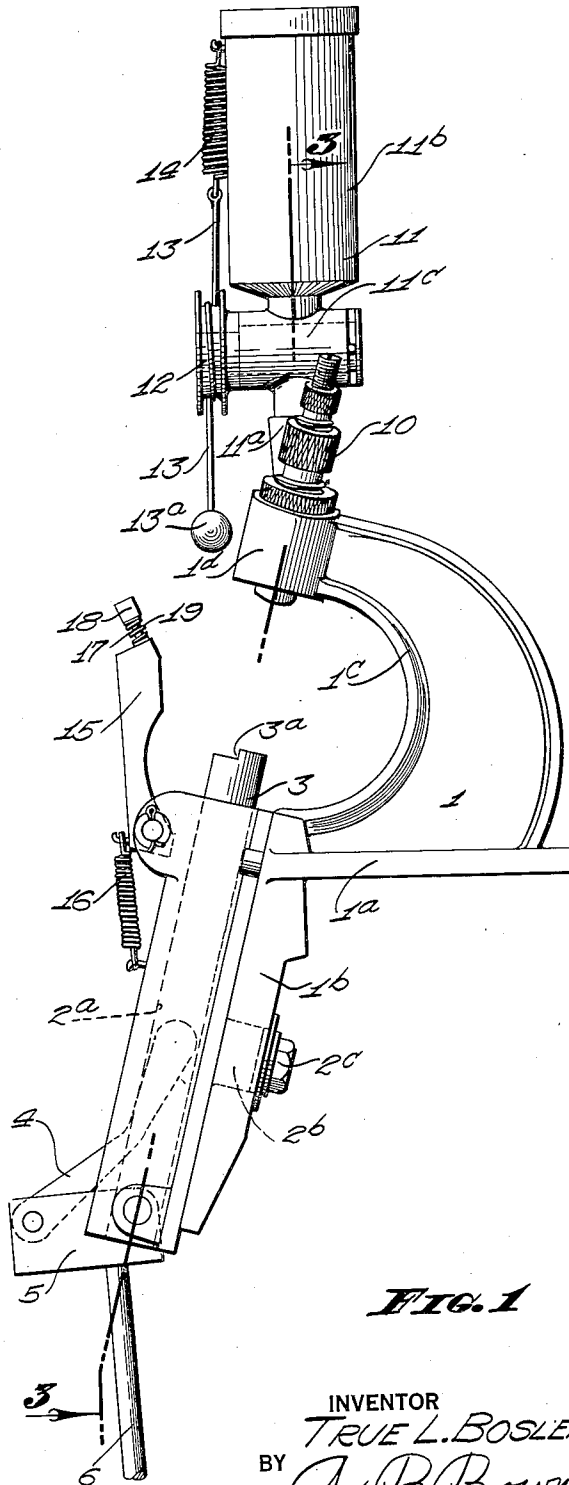
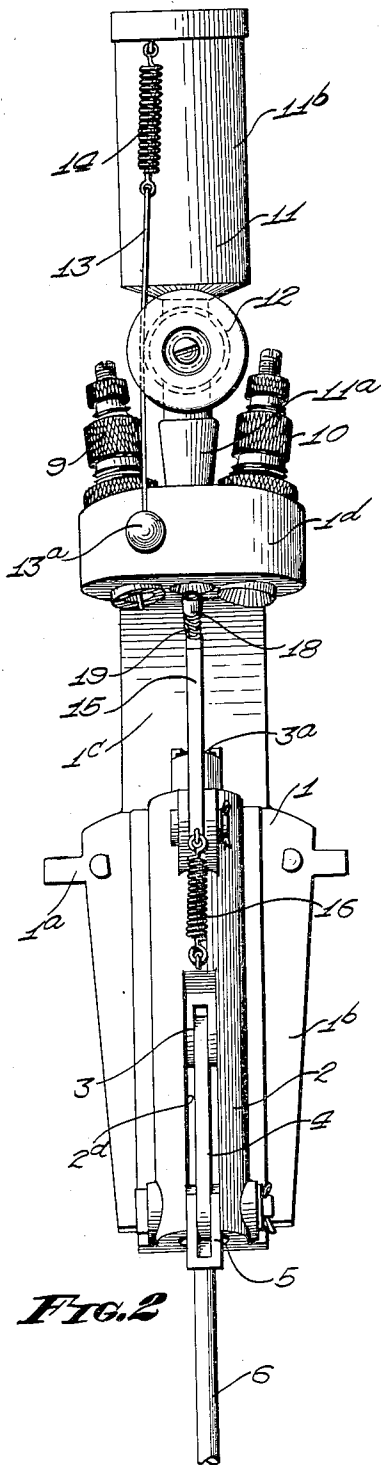
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1,979,603

CARTRIDGE RELOADER

Filed July 10, 1933

2 Sheets-Sheet 1



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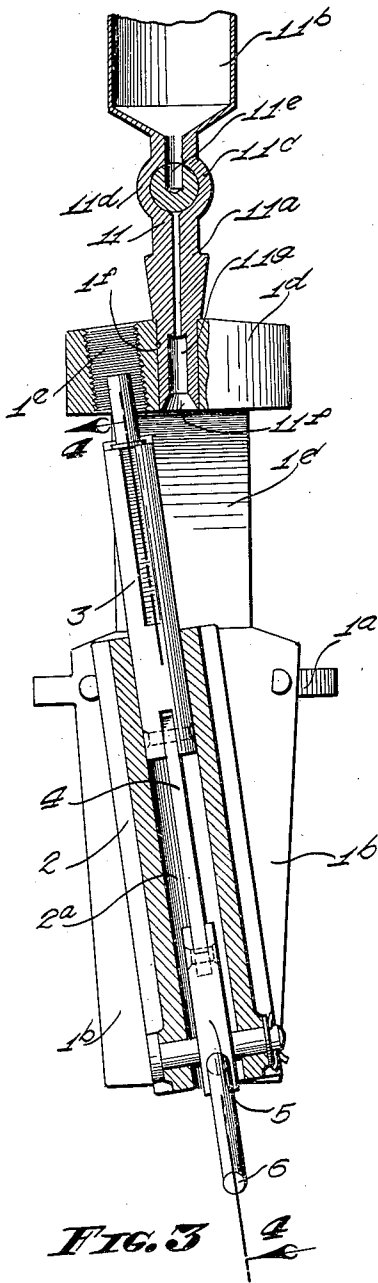
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UNITED STATES PATENT OFFICE

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CARTRIDGE RELOADER

True L. Bosler, San Diego, Calif.

Application July 10, 1933, Serial No. 679,744

12 Claims. (Cl. 86—23)

My invention relates to cartridge reloaders, and the objects of my invention are:

First, to provide a machine of this class which is particularly designed for use by sportsmen who practice shooting thereby enabling such persons to reduce the expense of their sport;

Second, to provide a machine of this class in which the several operations required to reload a shell are performed with the one machine without removing the shell once it has been inserted therein, thereby enabling the shell to be reloaded in a minimum amount of time;

Third, to provide a machine of this class which is particularly compact and easy to operate;

Fourth, to provide a machine of this class which is arranged in the form of a hand operated tool and capable of economical manufacture so as to be particularly suitable for those who wish to effect the saving obtained by reloading their shells;

Fifth, to provide on the whole a novelly constructed cartridge reloading machine which is durable, efficient in its action, and capable of long and continued use without deterioration.

With these and other objects in view as will appear hereinafter, my invention consists of certain novel features of construction, combination, and arrangement of parts and portions as will be described hereinafter in detail and particularly set forth in the appended claims, reference being had to the accompanying drawings and to the characters of reference thereon which form a part of this application, in which:

Figure 1 is a side elevational view of my cartridge reloader; Fig. 2 is a front elevational view thereof; Fig. 3 is a sectional view thereof through 3—3 of Fig. 1 showing the cartridge holding portion in its first position but with the die members removed to facilitate the illustration; Fig. 4 is a longitudinal sectional view thereof through 4—4 of Fig. 3 illustrating the manner in which the fresh cap is inserted in the cartridge; and Fig. 5 is a fragmentary elevational view taken along the line of 5—5 of Fig. 4.

Similar characters of reference refer to similar parts and portions throughout the several views of the drawings.

Frame member 1, guide member 2, shell holder 3, link 4, arm member 5, handle 6, stops 7, catch 8, decapping and resizing die 9, bullet seating and crimping die 10, powder supplying means 11, wheel 12, cable 13, spring 14, arm 15, spring 16, pin 17, cup member 18, and spring 19 constitute the principal parts and portions of my cartridge reloader.

A frame member 1 is provided which comprises a supporting or base portion 1a adapted to rest on a table at an edge thereof, a downwardly and outwardly sloping bracket portion 1b and an upwardly and forwardly curved bracket 1c. The bracket 1b is provided with a flat or smooth forward face against which lies a guide member 2. The guide member 2 comprises a flat portion which engages the flat face of the bracket 1b and a longitudinally extending sleeve 2a. Intermediate its ends the flat side of the guide member 2 is provided with a journal lug or boss 2b which fits into an aperture in the bracket 1b, said aperture forming a bearing therefor. The boss 2b is suitably secured in the aperture by means of a bolt or the like 2c, as shown in Figs. 2 and 4.

The sleeve portion 2a is provided with a cylindrical bore therethrough in the upper portion of which is slidably mounted a shell holder 3 in the form of a cylindrical elongated bar. The upper end of the shell holder 3 is provided with a step forming a diametrically extending shoulder. The longer portion of the end is provided with a semi-circular concentric recess 3a shaped to fit the base of a shell or cartridge and hold the same against axial movement relative to the holder. The lower portion of the sleeve 2a is provided with a slot 2d in its forward side. The lower end of the shell holder 3 is pivotally attached to a link 4 which extends downwardly and outwardly through the slot 2d, and is joined at its lower outer end to an arm member 5. The arm member 5 extends from its connection with the link rearwardly into the lower end of the sleeve portion 2 and is journaled therein. A handle 6 extends from the arm member 5 so that by operation of the handle the shell holder 3 is caused to reciprocate.

It is desired that the guide member 2 occupy three angular positions with respect to the bracket 2b. This is accomplished by the means of two stops 7 which define the two extreme positions of the guide member as indicated in Fig. 3. The central position midway between the stops is determined by a catch in the form of a ball which fits into a recess formed in the rear face of the guide member and yieldably held therein by means of a spring 8a. Said catch and its spring are mounted in the bracket 1b, shown best in Fig. 4.

The upwardly curved bracket 1c terminates in a head portion 1d positioned in axial alignment with the guide member 2, it being noted that the guide member is moved on a rearwardly and upwardly directed angle. The head 1d is provided

with a pair of downwardly converging internally threaded bores 1e. These bores are concentric with the holder 3 when the guide member is in either of its extreme positions. Into one of the bores 1e is inserted a decapping and resizing die. This die is conventional in structure and is designed to resize the inner and outer walls of the shell, to bell the mouth of the shell, and to decap or remove the exploded cap from the shell. This entire operation is accomplished when the holder thrusts the fired shell into the die 9. The other bore 1e receives a bullet seating and crimping die 10, said die 10 is likewise conventional in structure, and is arranged to force a bullet into the shell the proper depth after the bullet has been set on the belled open end of the shell, and at the same time crimp the belled end so that the bullet is held.

The head 1d is provided with an additional bore 1f located between the bores 1e. A powder supplying means 11 is provided comprising a tubular lower portion 11a and a reservoir or chamber 11b at its upper extremity. The tubular portion 11a is enlarged intermediate its ends to form a casing portion 11c forming a traverse cylindrical bore in which is mounted a core 11d. The core 11d is provided with a socket 11e therein which is adapted to hold the desired quantity of powder and is arranged to communicate with the upper portion of the passage in the tubular portion 11a so that powder from the chamber 11b may fill the socket. When the core 11d is turned one-half turn, it dumps the powder into the lower end of the tubular portion where it falls into the cartridge. In order to facilitate the filling of the cartridge without spilling the powder, the lower portion of the tubular portion 11a is countersunk, as indicated by 11f, and is enlarged as indicated by 11g so as to form a shoulder against which the shell bears while being filled.

The core 11d is provided with a wheel 12 at its forward end around which is wrapped a cable 13. The cable 13 is secured to the wheel intermediate its ends and is attached at its one end through a spring 14 to the upper portion of the reservoir 11b. The lower end of the cable is provided with a suitable knob 13a so that a downward pull thereon rotates the core 11d a half turn.

The upper end of the guide member 2 is provided a pair of bracket lugs 2e which pivotally support the lower end of an arm 15. The arm 15 is adapted to move in a plane passing through the axis of the shell holder 3, and is shiftable from one position clear of the holder to a position with one portion in axial alinement, there being provided a slot 3b in the holder for receiving the end of the arm 15. A spring 16 normally holds the arm 15 in its out of the way position, as shown in Figs. 1 and 2. The extended end of the arm 15 is provided with a small upwardly directed pin 17 adapted to occupy a concentric relation with the shell holder 3 when the arm 15 is shifted to position shown in Fig. 4. The extended end of the pin 17 supports a cup member 18 of such a size as to receive a cartridge cap. The cup member 18 is slidable upon the pin 17 and is held in its extended position by means of a spring 19.

Operation of my cartridge reloader is as follows: A fired shell or cartridge is inserted in the upper end of the holder 3; the guide member 2 is then set in the position shown in Fig. 3; and the shell holder is raised so that the shell or cartridge enters the capping and resizing die 9. When in the die the old cap is forced out of the

shell whereupon the arm 15 and cup member 18 with a fresh cap is moved into the position shown in Fig. 4; and the shell holder is moved downwardly depressing the cup member 18 against the action of the spring 19, and thereby forcing the shell cap into the base of the shell. The shell holder 3 is then raised slightly releasing the arm 15 which then swings to its normal position shown in Figs. 1 and 2. The guide member 2 is then moved to its central position shown in Figs. 1 and 2 and the shell holder is again raised directing the shell into the enlarged portion 11g of the powder supplying means 11, whereupon cable 13 is pulled causing a charge of powder to be poured into the shell. The shell holder 3 is then lowered again and a bullet is set in the belled upper end of the shell, and the guide member 2 is moved to its extreme right hand position in alinement with the bullet seating and crimping die. The shell holder is again raised causing the shell and bullet to enter the bullet seating and crimping die, whereupon the bullet is properly positioned and secured relative to the shell. When the shell holder is again lowered the shell or cartridge is completed.

It is obvious that with the foregoing described arrangement that a complete reloading of a shell or cartridge may be made without removing the cartridge from the machine, and also that the steps follow in natural and rapid succession so that the reloading operation may be quickly completed.

Though I have shown and described a particular construction, combination, and arrangement of parts and portions, I do not wish to be limited to this particular construction, combination, and arrangement, but desire to include in the scope of my invention the construction, combination, and arrangement substantially as set forth in the appended claims.

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

1. In a cartridge reloader, a frame, a plurality of cartridge treating means carried by said frame and adapted to perform the various steps taken in reloading a cartridge, said means disposed with their axes intersecting at a common center, a support pivotally mounted about said common center, and a cartridge holder carried by said support, said support being shiftable to bring said holder and a cartridge into axial alinement with any of said treating means.

2. In a cartridge reloader, a frame, a plurality of cartridge treating means carried by said frame and adapted to perform the various steps taken in reloading a cartridge, a support pivotally mounted on said frame, a cartridge holder carried by said support, said support being shiftable to bring said cartridge holder into registry with any of said treating means, and a recapping means carried by said support and adapted to co-act with said holder to insert a cap in said cartridge.

3. In a cartridge reloader, a frame, a plurality of cartridge treating means carried by said frame and adapted to perform the various steps taken in reloading a cartridge, said means disposed with their axes intersecting at a common center, a support pivotally mounted about said common center, a cartridge holder carried by said support, said support being shiftable to bring said holder and a cartridge into axial alinement with any of said treating means, and a recapping means carried by said support and adapted to co-act with said holder to insert a cap in said cartridge.

4. In a cartridge reloader, a frame, comprising a base portion, an upwardly extending bracket terminating in a supporting head, and a downwardly extending bracket, a plurality of cartridge treating means carried by said head and adapted to perform various steps in reloading a cartridge, a support pivotally mounted on said downwardly extending bracket, and a cartridge holder carried by said support, said support being shiftable to bring said cartridge holder into registry with any of said treating means.
5. In a cartridge reloader, a frame, comprising a base portion, an upwardly extending bracket terminating in a supporting head, and a downwardly extending bracket, a plurality of cartridge treating means carried by said head and adapted to perform various steps in reloading a cartridge, a support pivotally mounted on said downwardly extending bracket and disposed so as to move about said common center, and a cartridge holder carried by said support, said support being shiftable to bring said holder and a cartridge carried thereby into axial alinement with any of said treating means.
6. In a cartridge reloader, a frame, comprising a base portion, an upwardly extending bracket terminating in a supporting head, and a downwardly extending bracket, a plurality of cartridge treating means carried by said head and adapted to perform various steps in reloading a cartridge, a support pivotally mounted on said downwardly extending bracket, a cartridge holder carried by said support, said support being shiftable to bring said cartridge holder into registry with any of said treating means, and a recapping means carried by said support and adapted to co-act with said holder to insert a cap in said cartridge.
7. In a cartridge reloader, a frame, comprising a base portion, an upwardly extending bracket terminating in a supporting head, and a downwardly extending bracket, a plurality of cartridge treating means carried by said head and adapted to perform various steps in reloading a cartridge, all having converging axes toward a common center, a support pivotally mounted on said downwardly extending bracket and disposed so as to move about said common center, a cartridge holder carried by said support, said support being pivotally shiftable to bring said holder and a cartridge carried thereby into axial alinement with any of said treating means, and a recapping means carried by said support and adapted to co-act with said holder to insert a cap in said cartridge.
8. In a cartridge reloader, a frame including a bracket, a cartridge decapping and resizing means, a powder supplying means, and a bullet setting and securing means carried by said bracket with their axes in converging relation and intersecting a common center, and a cartridge supporting device journaled from said frame and about said common center whereby a cartridge may be shifted into axial alinement with any of said means.
9. In a cartridge reloader, a frame including a bracket, a cartridge decapping and resizing means, a powder supplying means, and a bullet setting and securing means carried by said bracket with their axes in converging relation and intersecting a common center, and a cartridge supporting device journaled from said frame and about said common center whereby a cartridge may be shifted into axial alinement with any of said means, said supporting device including a reciprocable cartridge holder, and mechanism for shifting said holder axially with respect to any of said means to bring said cartridge into co-action therewith.
10. In a cartridge reloader, a frame including a bracket, a cartridge decapping and resizing means, a powder supplying means, and a bullet setting and securing means carried by said bracket with their axes in converging relation and intersecting a common center, and a cartridge supporting device journaled from said frame and about said common center whereby a cartridge may be shifted into axial alinement with any of said means, said supporting device including a reciprocable cartridge holder, and mechanism for shifting said holder axially with respect to any of said means to bring said cartridge into co-action therewith, and a recapping means carried by said support and adapted to co-act with said holder to insert a cap in said cartridge.
11. In a cartridge reloader, a frame, a plurality of cartridge treating means carried by said frame and adapted to perform various steps in reloading a cartridge, all of said treating means having converging axes intersecting in a common center, and a cartridge supporting device journaled from said frame and about said common center whereby a cartridge may be shifted into axial alinement with any of said means.
12. In a cartridge reloader, a frame, a plurality of cartridge treating means carried by said frame and adapted to perform various steps in reloading a cartridge, all of said treating means having converging axes intersecting in a common center, a cartridge supporting device journaled from said frame and about said common center whereby a cartridge may be shifted into axial alinement with any of said means, and a recapping means carried by said support and adapted to coact with said frame to insert a cap in a cartridge.

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