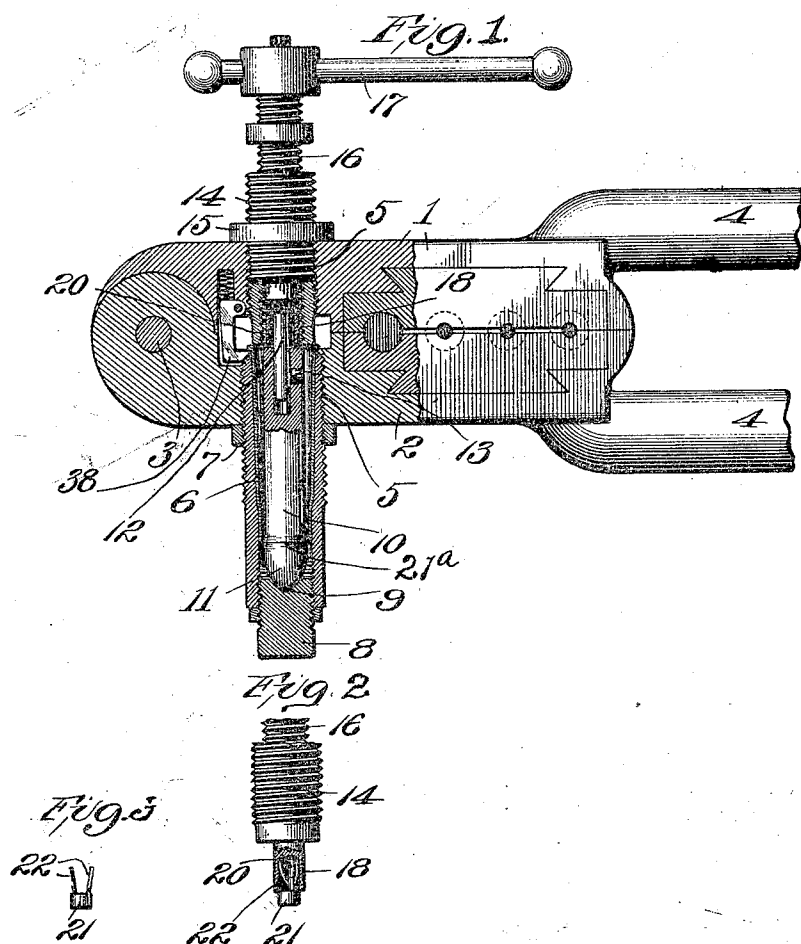


S. G. WRAY.
 RELOADING MACHINE FOR CARTRIDGES AND SHELLS.
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1,012,784.

Patented Dec. 26, 1911.



Attest:
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UNITED STATES PATENT OFFICE.

SILAS G. WRAY, OF GRAND JUNCTION, COLORADO.

RELOADING-MACHINE FOR CARTRIDGES AND SHELLS.

1,012,784.

Specification of Letters Patent.

Patented Dec. 26, 1911.

Application filed April 11, 1910. Serial No. 554,803.

To all whom it may concern:

Be it known that I, SILAS G. WRAY, a citizen of the United States, residing at Grand Junction, Colorado, have invented a new and useful Improvement in Reloading-Machines for Cartridges and Shells, of which the following is a specification.

This invention relates to machines for reloading shells or cartridges, and its object is to provide a conveniently portable machine operable to remove the exploded cap and replace it with an explosive cap.

Other objects are to be attained by my invention, all of which will appear from the following description, reference being made to the accompanying drawings in which I have illustrated one embodiment of the invention, and in which—

Figure 1 is a sectional view of the machine and the decapping mechanism applied thereto. Fig. 2 is a detail view of the device employed to press into position the new explosive cap. Fig. 3 is a view of the cap pressing device detached from the support.

The machine in the embodiment shown, comprises an upper member 1, and a lower member 2, pivotally united at one end by a hinge-pin 3, which is rigid and turns with the upper member 1. Said members are parallel and, in close adjustment, contact with each other, in the manner shown in Fig. 1. Each of said members is provided with an operating handle 4, whereby they may be properly manipulated to perform the different functions hereinafter attributed to them.

Near one end of the members 1 and 2 is a threaded hole 5, extending through both of said members. A loading chamber 6 is provided with exterior threads, and is operable into the threaded opening in the lower member 2, and may be provided with a jam-nut 7, adapted to engage against the surface of the lower member to prevent accidental displacement, by rotation of said chamber. The lower extremity of the loading chamber 6 is interiorly threaded, for engagement with a threaded plug 8, the inner end of which contains a pointed de-

pression 9. A decapping element 10 (Fig. 1) has a pointed end 11, adapted to fit into the depression 9. A projection 12 projects from a hole in the opposite or upper end of the member 10, wherein it is retained by a set-screw 13. The upper member 1 supports within the threaded hole therein, a cylindrical punch member 14, retained against displacement by a jam-nut 15, which engages against the outer surface of said member 1. A screw-stem 16, operates within the punch member 14, and is provided with a turning handle 17 on its outer end. The plunger 18 is connected with the inner end of screw-stem 16 by a swivel connection 19, for the purposes hereinafter explained, and the inner end of said plunger has a hole 20 therein, for the reception, when needed for recapping as hereinafter explained, of a plug 21, retained therein by springs 22 which press against the walls of said opening.

In decapping operations, the element 10 is placed within chamber 6, with its pointed end 11 resting within depression 9. The exploded shell is then inserted within chamber 6, over and around member 10, with the exploded cap resting upon the top of the plug 12, the plug 18 being elevated within punch 14 till its lower end is above that of said punch. The member 1 is then closed upon member 2, which operation brings the lower end of the punch 14 in contact with the outer rim of the shell; when a further forcing together of member 1 and 2 will dislodge the exploded cap and the end of plug 12 will protrude through the opening in the upper end of the shell, from which the cap has thus been dislodged, and continued closing together of members 1 and 2 will bring the lower and thin edge of the shell in contact with the enlargement 21 (Fig. 3). A slight additional pressure will remove any possible remaining crimp from said thin edge preparatory to reloading. Preparatory to recapping, the plug 8 and element 10 are removed from loading chamber 6, and the plunger 18 is lowered until its lower end is below that of the punch 14, and into the opening 20 is inserted the plug

21; the shell being replaced into loading chamber 6, the new explosive cap is then forced manually into the opening in the shell and the members 1 and 2 are then brought together pressing the plug 21 down upon the cap, and forcing the latter into its seat in the shell. The shell is now entirely ready for reloading.

I provide also an extractor 38 connected with the member 1, whereby the loaded shell may be automatically released from the loading chamber, when the members 1 and 2 are separated.

I am aware there may be modifications of this invention, in various ways; and I do not, therefore, restrict myself to the specific features described, nor to the relative adjustments attributed to them, for it is obvious that they may be used in various adjustments within the scope of the appended claims, without departure from the spirit and scope of the invention.

What I claim and desire to secure by Letters Patent is—

1. A machine of the character described, comprising two members hinged together, a chamber removably carried by one of said members, a projection removably mounted in said chamber and arranged to press against the inner side of an exploded cap in the shell, and a pressure or punch member adjustably carried by the other of said hinged members and arranged to press the rim of the shell effectively to cause said projection to remove the exploded cap, substantially as specified.

2. A machine of the character described, comprising two members hinged together, a shell support removably mounted in one of said members, a projection on said shell support arranged to press against the inner side of a cap on a shell on said support, a hollow plunger carried by the other one of said hinged members and operable to press the shell on said support effectively to cause the said projection to remove the cap from the shell, and an extractor effective to release the shell from said shell support, substantially as specified.

3. In a device of the character described, two members hinged together, a chamber removably carried by one of said members arranged to receive an empty shell, a part in said chamber arranged to be embraced in the empty shell, a projection on said part arranged to press against the inner side of the cap in the shell, a plunger on the other one of said hinged members arranged to press the shell effectively to cause the part aforesaid to eject the cap from the shell, and automatic means for releasing the shell from said chamber when said hinged mem-

bers are moved apart, substantially as specified.

4. In a device of the character described, 65 a chamber arranged to receive an empty shell, a projection in said chamber arranged to press against the cap of the shell, a movable support, a hollow plunger carried by said support and arranged to press against 70 the end of the shell effectively to cause the said projection to eject the cap, and a device on said movable support arranged to engage with and release the shell from said chamber when said support is removed, sub- 75 stantially as specified.

5. A machine for decapping and capping shells, comprising a chamber arranged to receive the empty shell, a movable plunger, devices operable effectively to eject the cap 80 from the shell in said chamber, a cap holder carried by said plunger and being operable effectively to press a cap into said shell, and means engaging with the shell effectively to release the shell from said chamber when 85 said plunger is withdrawn therefrom, substantially as specified.

6. The combination with a chamber arranged to receive an empty shell, and co-operating devices movable toward each other 90 effectively to eject the cap from the shell, of an element carried by one of said devices arranged to engage with the shell when said devices are close together and to release said shell from said chamber when said devices 95 are moved away from each other, substantially as specified.

7. The combination with two members hinged together and arranged to be moved toward and away from each other, a shell 100 support in one of said hinged members, and co-operating devices acting effectively to eject the cap from the shell in said support, when said members are moved toward each other, of a device carried by the other one of said 105 hinged members operable effectively to release the shell from said support when said members are moved away from each other, substantially as specified.

8. A machine of the character described, 110 comprising two members hinged together, one of said members being arranged to support a cartridge, a hollow punch member adjustably carried by the other of said members, a cap forming and supporting device 115 carried in said punch member, and means for withdrawing said device relatively a considerable distance from the end of the said punch member as required for decapping operations, substantially as specified. 120

9. A machine of the character described, comprising two members hinged together, a cartridge support in one of said members, means movable carried by said support for

ejecting a cap from the shell, a punch carried by the other of said members and co-operating with said cap ejecting means, a cap presser in said punch, and means for
5 operating said cap presser as required to make room for the ejection of the exploded cap and to insert a new cap in place thereof, substantially as specified.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

SILAS G. WRAY.

Witnesses:

GERTRUDE G. RUSSELL,
W. S. GILLETTE