

O. ARNASON.
 RELOADING TOOL.
 APPLICATION FILED MAR. 23, 1911.

1,023,913.

Patented Apr. 23, 1912.
 3 SHEETS-SHEET 2.

Fig. 2.

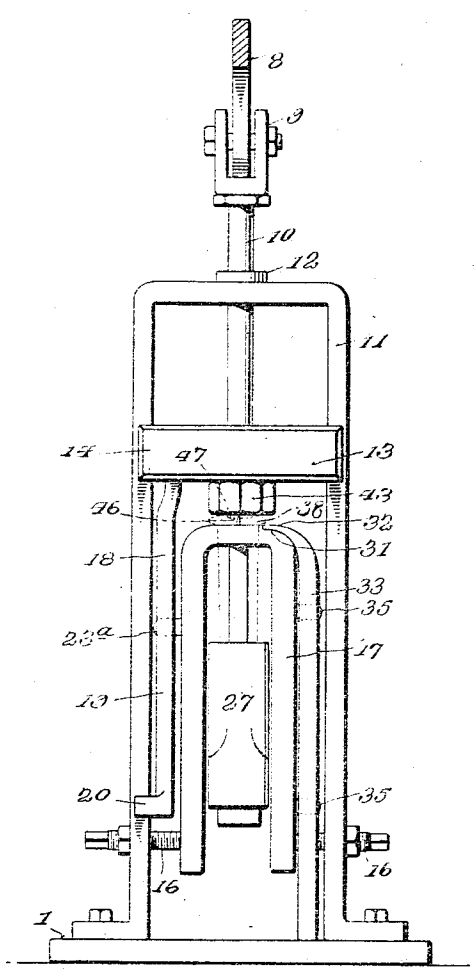
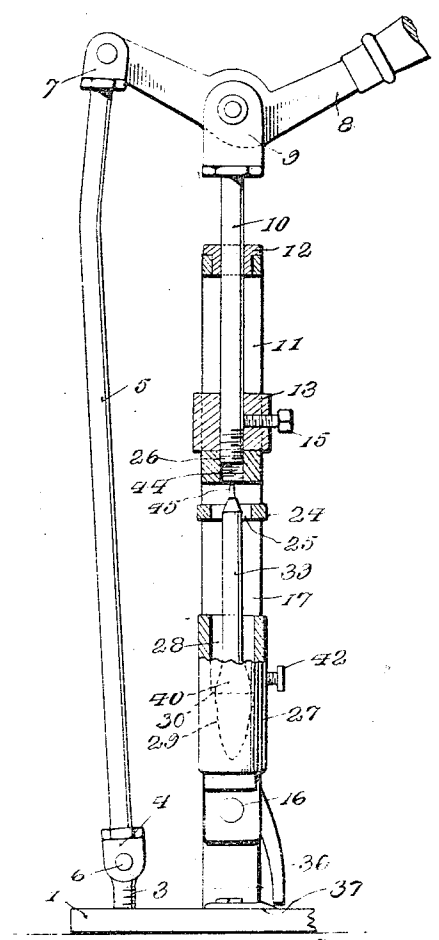


Fig. 3.



Inventor.

Olafr Arnason

Witnesses
 Albert W. Munnay.
 M. L. Neal.

By Harry Ellis Chandlee,
 Attorney

UNITED STATES PATENT OFFICE.

OLAFAER ARNASON, OF COTTONWOOD, MINNESOTA.

RELOADING-TOOL.

1,023,913.

Specification of Letters Patent.

Patented Apr. 23, 1912.

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To all whom it may concern:

Be it known that I, OLAFER ARNASON, a citizen of the Kingdom of Denmark, residing at Cottonwood, in the county of Lyon and State of Minnesota, have invented certain new and useful Improvements in Reloading-Tools, of which the following is a specification.

My invention relates to improvements in reloading tools, and has for its leading object the provision of a simple and efficient reloading tool which will satisfactorily perform the various operations of decapping, recapping, and securing the bullet in the reloaded shell.

Another object of my invention is the provision of a reloading tool having improved mechanism for automatically swinging the loading block outward and for ejecting the shell as the loading block is so moved.

Other objects and advantages of my improved loading machine will be readily understood from the following description taken in connection with the drawings, and it will be understood that I may make any changes in the specific structure shown and described within the scope of the claims without departing from or exceeding the spirit of the invention.

Figure 1 represents a side elevation of my complete tool. Fig. 2 represents a front view thereof. Fig. 3 represents a vertical sectional view with the decapping members in position. Fig. 4 represents a similar sectional view with the recapping member in position. Fig. 5 represents a perspective view of the block operating arm. Fig. 6 represents a detailed view of the cartridge ejector. Fig. 7 represents a cross sectional view on line 7—7 of Fig. 1, and Fig. 8 represents a cross sectional view on line 8—8 of Fig. 1.

In the drawings, the numeral 1 designates the base plates of my machine which is provided with a suitable clamp 2 for securing the device to a table or other support. Rising centrally from the back of the base plate 1 is the lug 3 spanned by the ears 4 of the rod 5 which are pivoted to the lug by the pin 6, while pivoted to the ears 7 at the upper end of the rod is the bell crank shaped handle 8 having pivoted thereto intermediate its length the ears 9 of the piston or cross head rod 10.

Secured to the plate 1 is the U-shaped

frame bar 11 having a bearing 12 in which the piston rod moves, said rod passing through the cross head block 13 which has the outer guide flanges 14 resting against the front and back of the frame bar on each side to guide the movement of the cross head block, said block being provided with a clamp screw 15 to secure it in position upon the cross head rod. Projecting inward from the frame 11 are the bolts 16 on the inner end of which are pivotally engaged the ends of the U-shaped loading block frame 17, the sides of said frame 17 being spaced inward from the inner faces of the frame 11. Engaged in the cross head block 13 is the upper end 18 of the plate 19 said plate having the U-shaped portion at its lower end providing the ears 20 which engage the frame 11 to guide the sliding movement of the plate. Said plate is formed intermediate its length with the laterally projecting portion 21, and formed in the plate is a vertical slot 22 having an inclined portion 23 extending outward into the offset 20, the frame 17 having a laterally projecting lug or pin 23^a adapted to move in said slots. As the cross head is reciprocated it slides with it the plate 19 and causes the inclined portion of the slot to engage the pin on its upward movement and cam the pin outward to swing the frame 17 outward on its pivot, while upon the downward movement of the cross head the inclined slot will force the pin and frame inward and the vertical portion of the slot will hold the pin and frame 17 in immovable position during the operation of the tool.

The frame 17 has the enlargement 24 at its central portion in which is formed the opening 25, said opening being in alinement with the depending end 26 of the cross head rod 10, while secured between the arms of the frame 17 is the loading block 27 having the central bore 28 in alinement with the opening in the frame and the rod 10, said bore being of size to receive the end of a shell at its upper portion and having the shouldered reduced portion 29 to receive the bullet, the purpose of its inclined shoulder 30 being later described. A recess 31 is formed in the top of the frame 17 at one side, and fitting into said recess is the bent yoke head 32 of the ejector plate 33 which has the slots 34 in which are engaged the pins 35 carried by the frame 17, the lower

end of said ejector plate having the rounded portion 36 to rise on the inclined block 37 which engages said end as the loading block and frame swing outward to force the plate 5 to slide upward and lift a shell, the yoke engaging under the rim 38 of the shell contained in the opening 25 and lifting the same.

In the use of my machine, I first place in 10 the bore of the loading block the punch 39 of size to fit within the shell and having an enlarged lower end 40 fitting tightly in the reduced bore 29, said punch being held in the bore 29 by a clamp screw 42 which 15 passes through one side of the loading block 27. I then engage the nut 43 on the end 26 of the rod 10, said nut depending below the end of the rod to provide the recess 44. A shell engaged in the opening 25 will fit 20 over the punch and the point 45 of the punch will fit up through the socket 46 of the end of the shell into the discharge percussion cap 47, while as the handle is swung to force the cross head downward, the lower 25 face of the nut will engage the outer portion of the end of the shell to force the shell downward, the punch forcing the cap out of the socket in the shell into the recess provided by the nut 43.

When the shells have had the caps removed, I disengage the punch 39 and substitute therefor the punch 48 having the 30 clamp screw engaging recess 49 and having the flared portion or shoulder 50. I then reengage the shells one at a time in the recess or opening 25 and remove the nut 43 to 35 permit the lower end 26 of the rod to engage and force downward first the cap to force it into the socket in the shell, the punch having a recess 51 to receive said socket, and the 40 continued movement of the rod forcing the capped shell down against the shoulder 50 of the punch, which spreads the lower end of the shell to permit of the ready insertion 45 of the bullet. I then remove the shell and insert the charge therein and press the bullet as far as possible into the shell. I then employ the machine with the nut 43 in position to engage the outer portion of the end 50 while spanning the percussion cap and remove the punch and place the cartridge shell nose downward in the bore of the loading 55 block and force the cross head downward to bring the nut forcibly against the shell to force it downward, the shoulder 30 engaging the lower end of the shell to crimp or force the same inward into clamping engagement with the bullet. The bullet having been thus secured I raise the handle 60 which swings the blocks outward, the ejector prying the shell upward into position where it can be readily removed by the fingers.

From the foregoing description taken in 65 connection with the drawings, the construc-

tion and operation of my improved reloading tool will be readily understood, and it will be seen that I have provided an improved tool having a frame with a loading block pivotally mounted in the frame and means for automatically swinging the block 70 upward and disengaging the shell, and it will further be seen that I have provided a compact and efficient tool which will quickly and easily decap, recap, and clamp the bullets 75 in position in the shell.

I claim:

1. A reloading tool, comprising a base plate, a yoke shaped frame secured to the base plate, a second frame of similar shape 80 pivotally secured to the first, an ejector carried by the second frame and operated upon the upward movement of the operating lever, an operating lever, a cross head slidably 85 mounted in the frame and reciprocated by the operating lever, a loading block secured in the pivotally mounted frame, and means carried by the cross head for controlling the movement of the supplemental frame on its pivots. 90

2. A reloading tool, comprising a yoke shaped frame, a cross head slidably mounted therein, a supplemental frame pivotally secured within the main frame and of similar shape thereto, a loading block secured in 95 the supplemental frame, said block and frame having aligned bores, a solid exteriorly threaded abutment depending from the cross head, a supplemental abutment engaged on the said abutment and depending therefrom 100 to provide an abutment ring, means for automatically regulating the position of the supplemental frame and the loading block, and an ejector operated by the outward movement of the loading block and frame. 105

3. A reloading tool, comprising a main frame, a supplemental frame pivotally secured to the main frame and of similar configuration to the main frame, a cross head 110 slidably mounted in the main frame, means for reciprocating the cross head, a plate depending from the cross head and having an angular slot formed therein, and a pin projecting from pivoted frame and engaged in the slot, whereby the reciprocal movement 115 of the cross head and plate causes the plate at the sides of the slot to cammingly engage the pin to adjust the supplemental frame on its pivot.

4. A reloading tool, comprising a main 120 yoke frame, a supplemental inverted U-shaped frame pivoted within the main frame, said supplemental frame having a shell receiving aperture formed centrally thereof, a base for supporting the main frame, an 125 ejector slidably secured to the supplemental frame and having an arm curving inwardly to the aperture of the supplemental frame, said ejector having a depending portion adapted to engage a block upon the base on 130

outward swinging of the supplemental frame
to force the ejector upward relative to the
said frame, a cross head slidably engaged on
the parallel portions of the main frame,
5 means for reciprocally shifting the cross
head, a pin laterally projecting from the
supplemental frame, and an arm depending
from the cross head and having an angular
track for receiving the pin, whereby move-

ment of the cross head and arm serves to 10
swing the supplemental frame inward and
outward.

It testimony whereof I affix my signature,
in the presence of two witnesses.

OLAFER ARNASON.

Witnesses:

ARTHUR E. ARNTSON,
CHRISTINE BRODD.