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COMBINATION WAX BULLET LOADER

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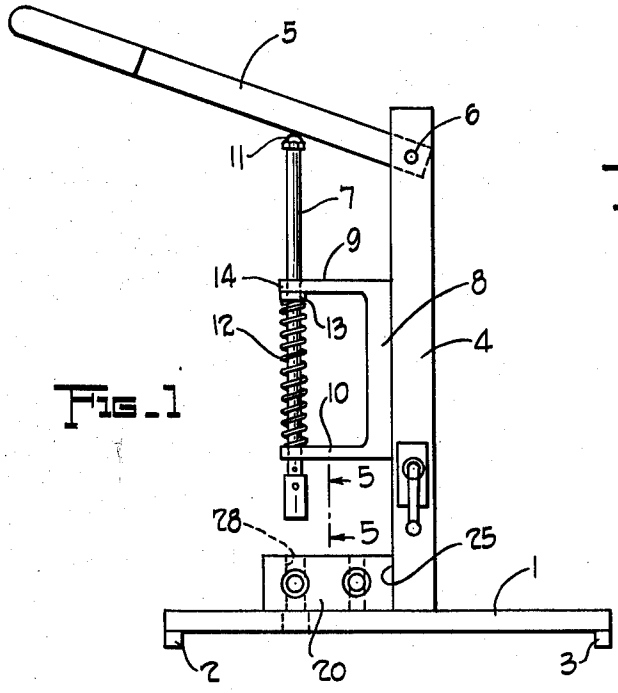


Fig. 1

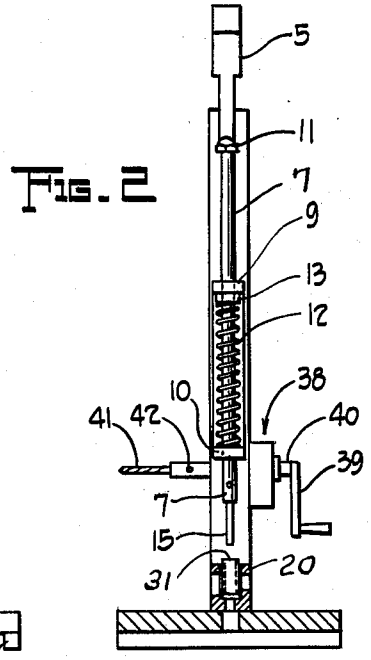


Fig. 2

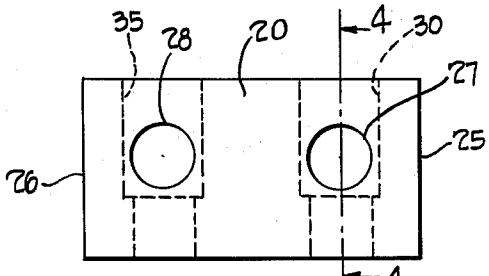


Fig. 3

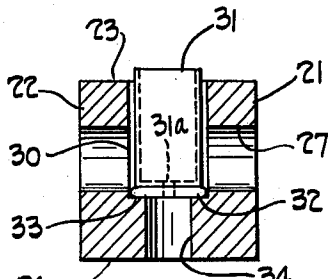


Fig. 4

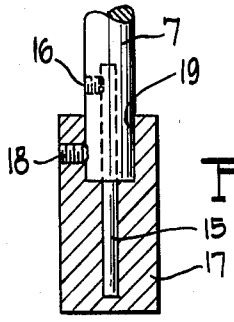


Fig. 5

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COMBINATION WAX BULLET LOADER

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This invention relates to bullet or shell loaders and primarily to such devices which are suitable for loading what are termed wax bullets.

In the art to which this invention is directed, wax bullets are used for several reasons and particularly for the sake of economy.

Wax bullets are well known and comprise the usual shell case or cartridge with a new cap or primer and a slug of wax filling the case. They are used for target practice and other purposes where long range accuracy is not required, nor can the expense of the usual lead bullets be justified. The economical aspects are even more pertinent when substantial quantities are in demand such as for police or other piston ranges with certain forms of bullet being particularly effective at very close range for simulation purposes and even accuracy.

Inasmuch as wax bullets have heretofore been assembled and used, and their value established, means which facilitate their manufacture will be highly desirable and this invention is directed thereto. Not only are there certain clear dangers in present methods of manufacture of wax bullets, such as injuries resulting from crude methods of re-priming the bullets, but where the wax slug used is improperly inserted, accuracy is impaired at even short range and at best known devices for manufacture of these bullets are crude and time taking in use. As a matter of fact most of the present day assembly of wax bullets is effected by hand tools, and particularly crude ones at that, and thus a device which incorporates what may be termed machine-like efficiency has a ready place in the field where wax bullets are contemplated for use.

In view of the foregoing, the primary object of this invention is to provide a bullet loading mechanism which will be simple of manufacture, easy to use, and entirely safe without danger being present as a result of the explosion of primers or caps as the case may be.

Yet another object of this invention is to provide a novel device of the character described, which is able to be used for re-priming and loading bullets of different calibers with absolute safety and availing of simple mechanism which can be provided at nominal cost and thus make even more feasible the use of greater or increased quantities of wax bullets and their use for the purposes intended.

Another object of the invention is to provide a novel form of bullet loading mechanism which includes certain pressure means arranged to remove exploded cap fragments from shell cases, insert and compress a slug of wax in the case and thereafter be usable for re-priming the shell prior to use, all of the foregoing to the end that when the bullet is finished and used the accuracy will be as great or greater than any comparable bullets heretofore known and dangers involved in their use will be minimized as well as the accuracy sought being substantially increased.

Other and further objects of the invention will be understood from the consideration of the specification appended hereto and shown in the drawing wherein:

FIGURE 1 is a side elevation view of a bullet loader according to the present invention.

FIGURE 2 is an end view taken from the left hand side of FIGURE 1.

FIGURE 3 is an enlarged view illustrating a shell block suitable for use with different bullets of different calibers.

FIGURE 4 is a sectional view taken about on the line 4—4 of FIGURE 3 looking in the direction of the arrows.

FIGURE 5 is an enlarged view fragmentary in nature taken about on the line 5—5 of FIGURE 1 looking in the direction of the arrows.

Referring now to FIGURE 1, the bullet loader of this invention is comprised of a generally rectilinear base 1 having suitable spacers therebeneath denoted 2 and 3 for purposes which will be explained subsequently.

Suitably affixed to and in some manner scured to the base 1 is the upright column 4 of square cross-section as one example of its possible manufacture, the column being scurely mounted on the base 1 and having at its upper end a handle 5 pivotally connected at 6 to the column and arranged to impinge intermediate its ends and preferably fairly close to the pivot 6 with a tool rod 7 which in this case may preferably be in the form of a round rod, which extends vertically about parallel to the column 4 and is supported for vertical movement by a bracket member 8.

The bracket member 8 is secured to the column 4 and includes the offstanding arm 9 at the upper section thereof and a further arm 10 spaced from the arm 9, both of these arms being equipped with suitable openings to guide the rod 7 therein.

At the upper end of the rod 7 is any suitable cap such as the member denoted 11 which will permit the arm 5 to slide slightly with relation thereto.

Intermediate the arms 9 and 10 mentioned previously, a compression spring 12 is provided, seated on the lower arm 10, and engaging an adjustable collar 13 fixed by means of a set screw 14 to the rod 7 whereby the tension on the spring 12 may be changed and in fact the motion of the rod 7 be limited thereby since expansion of the spring 12 will cause the collar 13 to press the underside of the arm 9 and thus maintain the rod 7 normally in its uppermost position despite the weight of the arm 5 which is engaged with the cap 11.

At the lower end of the rod 7 the same is formed about as shown in FIGURE 5 so as to be essentially a tool holding section with a tool 15 shown as extending into a drilled opening in the end of the rod 7 and maintained in position by a set screw 16. This tool 15 is a depriming or decapping tool and is used in a manner to be subsequently set forth.

In FIGURE 5 there is also shown a further tool member 17 suitably fixed to the end of the rod 7 by means of a set screw 18, the tool 17 being bored out as at 19 to surround the extremity of the rod 7. This tool 17 is for compressing and positioning purposes as will likewise be set forth subsequently.

A shell block generally designated 20 is shown in FIGURES 3 and 4 as comprising a rectilinear body having the sides 21 and 22 upper face 23 and lower face 24 with ends 25 and 26, the entire block being a solid metal member preferably and including the bores 27 and 28 extending transversely from side 21 to side 22, the bore 27 for example being intended for use with 38 caliber shells in a manner to be subsequently explained and of about 7/16 inch in diameter. The bore 28 is intended for use with 45 caliber shells and is suitably sized accordingly.

Extending from the upper surface 23 toward the lower surface 24 is a bore 30 of a depth about equal to the length of the shell case, there being a shell case 31 shown positioned therein in FIGURE 4 with the priming end 32 lowermost and resting upon a shoulder 33 formed at the end of a counter bore 34, the latter being of smaller diameter than the bore 30 as will be understood.

The other bore as shown in FIGURE 3 and denoted 35 is for the 45 caliber shell to be positioned in a like manner with the cap or priming end lowermost in a man-

ner as shown in FIGURE 4 with reference to the 38 caliber type of shell.

Shown as extending transversely through the column 4 is a reaming or drilling unit generally designated 38, which comprises a crank 39, attached to a shaft 40, the end of the shaft 40 at the left as viewed in FIGURE 2 having provision to receive a suitable drill such as 41 therein maintained in position by a set screw 42. The use to which this device is placed will be described momentarily when the manner of use of the entire device is set forth as will now be undertaken.

Assuming that we are dealing with a 45 caliber shell, the same is first positioned as shown in FIGURE 4 with the priming end downwardly, and the tool 17 removed from the end of the rod 7 so that the tool 15 extends outwardly, this tool 15 being of suitable size to enter the priming cap opening about as shown in FIGURE 2 and by suitable depression of the handle 5 the rod 7 is caused to move downwardly and thereby the tool 15 into the case and through the priming opening of the shell 31 which priming opening is denoted 31*a* in FIGURE 4. Thus the remnants of the old or former cap if there be such are removed from the shell case, and thereafter the shell case is removed and manipulated into position so that the drill 41 can be used to enlarge the priming opening such as 31*a* therein, the crank 39 being suitably rotated to effect such a drilling action.

Thereafter the block 20 is positioned about as shown in FIGURE 1 with the bore 28 thereof extending vertically and the end 25 abutting the column 4 for positioning purposes. It will also be noted that the shell block 20 is aligned with the column 4 as seen in FIGURE 2 so that proper spacing of the shell with relation to the column is established.

Thereafter the shell such as 31 is placed with the priming end or cap end uppermost in the bore 28 and thus the bore 28 in effect resizes this shell if it has formerly been fired and the open end flared slightly. When the end 32 is seated on the upper surface 21, thereafter a priming cap may be entered therein for positioning as will be subsequently explained.

Description of the placing of the wax slug in the shell case should have been undertaken and for that purpose the block 20 will have remained in the position as indicated in FIGURE 4 with a cylindrical slug of wax availed of and positioned with the end started in the opening of the shell such as 31 and thereafter since the tool 17 will have been placed on the end of the rod 7, the handle 5 is again depressed and the wax slug caused to move downwardly into the shell case. It will be apparent that as this takes place the wax will fill all the interior of the shell since the priming opening will remain open and the handle may be pressured greatly enough to cause the wax to fill the interior of the shell completely. The provision of the wax cylindrical slugs may be undertaken in any of a number of different ways not forming a part of this invention but being obvious to those familiar with the art.

Thereafter the shell block is positioned as previously suggested in FIGURE 1 with the bore 28 aligned about as indicated, the shell having been inverted and supported with its rim uppermost, thereafter the priming cap being positioned in the priming opening such as 31*a* and again the handle 5 depressed so that the tool 17 engages such priming cap and causes the same to move into the opening and be brought into flush condition with regard to the rim end of the shell.

It will be apparent that the steps heretofore set forth are preferably carried out about in the order suggested since they most economically avail of the motions required to effect the same but since there is no percussion taking place the danger of the cap exploding prematurely is obviated by the construction herein under consideration and the wax is very densely compacted within the shell to provide a more nearly realistic slug when firing is undertaken.

It will be understood that shells of different calibers can be used where suitable shell blocks are provided, the manipulation for loading a 38 caliber shell being parallel to that described in relation to a 45 caliber shell as will be readily understood.

We claim:

1. In a cartridge assembling tool for loading cartridges with wax bullets, the combination comprising: a base, an upright column rigidly mounted thereon, a tool rod operatively supported by the column for vertical movement between first and second positions and normally urged to said first position, a lever pivotally mounted on said column adjacent the upper end thereof, said lever operatively interconnecting said tool rod and said column and adapted to move the tool rod between positions, first and second tool means selectively connectable to and movable with said tool rod, a shell case block movably mounted on said base, said block including means defining a plurality of angularly related shell case receiving openings extending therethrough, each of said openings communicating with every other opening within which a shell case may be selectively supported in any one of a plurality of positions, said first tool means comprising a primer punch selectively cooperable with a shell case supported in one position within one of said openings in said block whereby an expended primer may be pressed out of said shell case and said second tool means comprising a combination primer and bullet press for selectively pressing a wax slug into the deprimed case, and subsequently pressing a primer cap into such case by manipulation of said lever, said second tool means including means defining an axially extending recess to accommodate said first tool means when said second tool means is mounted on said tool rod.

2. The combination as claimed in claim 1, wherein a series of openings of different sizes are formed in the shell block to support shells of different sizes therein in the said plurality of positions.

3. The combination as claimed in claim 1, wherein the shell block includes an opening to re-size a shell case after firing, and another opening to support a shell case in position to facilitate positioning a wax slug therein.

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