Nov. 22, 1949 H. C. LIMA 2,488,732

LOADER FOR REVOLVERS

Filed Feb. 24, 1948

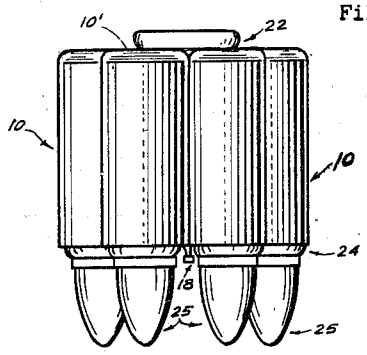


FIG. 1.

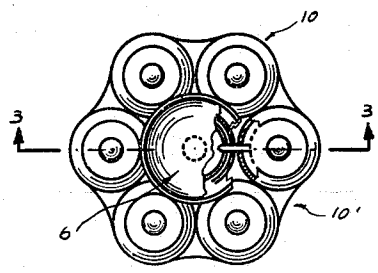


FIG. 2.

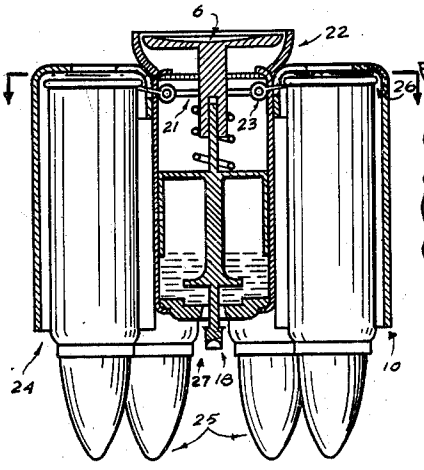


FIG. 5.

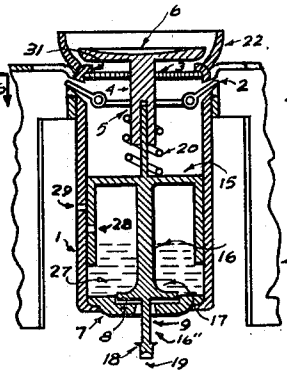


FIG. 4.

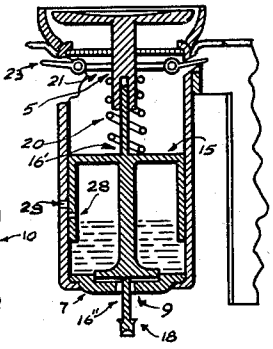


FIG. 3.

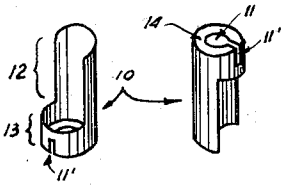


FIG. 6.

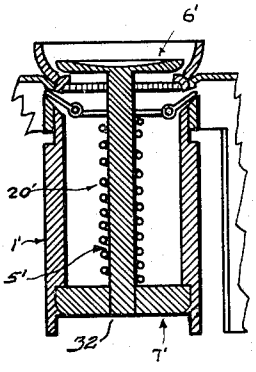


FIG. 8.

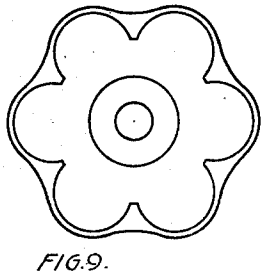


FIG. 9.

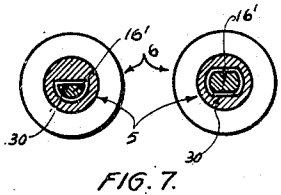


FIG. 7.

Inventor

Héctor Domecq-Lima.

Patented Nov. 22, 1949

2,488,732

UNITED STATES PATENT OFFICE

2,488,732

LOADER FOR REVOLVERS

Hèctor Consuegra Lima, Habana, Cuba

Application February 24, 1948, Serial No. 10,244
In Cuba March 25, 1947

1 Claim. (Cl. 42—89)

1

This invention relates to loaders for revolvers, and it has for its object to provide certain improvements in the loader for revolvers which were the subject-matter of my prior United States Patents No. 2,406,231 and No. 2,406,232, dated August 20, 1946.

Another object of the invention is to provide an improved loader whereby the reloading and cooling of a revolver's chambers must not necessarily be effected at the same time, but both operations can be performed independently or simultaneously at the user's will.

A further object of the invention is to provide an improved loader structure that will increase the degree of efficiency of the loader's operation, and wherein the cartridge receiving cylinders have their walls incomplete and the central cylinder is of a diameter slightly smaller than the diameter of the cartridge receiving cylinders and its wall is slightly thicker than as heretofore provided, whereby a greater sliding area and a safer positioning of the cartridge holding pins are attained.

For a better comprehension of the invention, reference will be had to the figures of the accompanying drawings, in which:

Fig. 1 is an outer elevational view of the improved loader of my invention.

Fig. 2 is a partly broken away top plan view of same.

Fig. 3 is a longitudinal vertical section view on line 3—3 of Fig. 2, showing the position in which the cartridges are held but no lubricating oil is discharged.

Fig. 4 is a similar section view of same, in the cartridge release position.

Fig. 5 is a similar section view to Fig. 3, showing the position in which the lubricating oil is discharged.

Fig. 6 shows two perspective views of one of the cartridge receiving cylinders.

Fig. 7 is a view showing the arrangement and outlines of the stems for actuating the cartridge holding and lubricating oil discharge mechanism.

Fig. 8 illustrates a modified form of the loader, unprovided with the lubricator-cooler mechanism.

Fig. 9 is a bottom plan view of the loader.

In the drawings, the numeral 1 indicates the central hollow cylinder of the loader, the top end of which has its edge provided with equidistant slots 2 having a bevelled bottom, said edge being partly bent inward to form flanges 31 adapted to serve as stops for a disc 3 having a central perforation 4 through which passes a hollow stem 5

2

having its top end secured to a disc 6 above said cylinder 1, the latter having a thickened bottom portion 7 provided with an inner recess 8 and an axial perforation 9.

To the central cylinder 1 are secured a plurality of hollow incomplete cartridge receiving outer cylinders 10 all parallel to the central cylinder 1, which can be made separately and then joined to the central cylinder 1 by means of outer vertical joint lines of soldering, or the same can be formed in a single piece from a suitable plastic material, in the latter case the outer vertical joint lines of soldering being omitted.

The length of all incomplete cylinders 10 is smaller than that of the cartridges and slightly greater than that of the central cylinder 1, and said cylinders 10 are of the same diameter which may be smaller than or equal to the dliameter of the central cylinder 1 but larger than the diameter of the cartridges so as to be apt to receive the latter loosely therein.

Each cartridge receiving cylinder 10, whether made separately or forming an integral part of a whole, is open below and its side wall is partly broken away about three quarters of its height from its bottom end, comprising one half of its contour approximately. In other words, starting from their bottom end, three quarters of each cylinder length forms a semi-cylinder, as indicated by 12 in Fig. 6, the remaining one-fourth portion 13 forming a complete cylinder.

The top portion 14 of each cylinder 10 is closed and provided with a central perforation 11 to permit the examination of the percussion cap of each cartridge 24, said perforation extending to form a slot 11' ending near the edge of the wall of the cylindrical portion.

The cartridge receiving cylinders 10 joined to the central cylinder 1 are so positioned that their slots 11' are in registration with the slots 2 of the central cylinder.

Within the central cylinder 1 is mounted a hollow cylinder 15 closed above and open below which smoothly fits into said central cylinder 1. Said hollow cylinder 15 is secured to a stem 16 passing therethrough and having its top portion 16' and bottom portion 16'' of smaller diameter than its central portion.

The central portion of smaller diameter of said stem 16 ends inferiorly in an enlargement 17 adapted to act as a valve to seat on the recess 8 formed in the bottom 7 of said central cylinder 1, while the lower portion 16'' of smaller diameter of stem 16 passes across perforation 9 of said bottom 7 and terminates in an enlarged end 18

provided with a lower recess 19 adapted to rest on a projection usually provided at the top center of the magazine of revolvers.

The top portion 16' of the stem 16 has its end inserted in the stem 5, which can be introduced further upon the stem 16 being forced upward by pressing the enlarged end 18.

A coil spring 20 surrounds the portion 16' of the stem 16 and the lower portion of stem 5, the lower end of which rests on the inner cylinder 15, and its upper end may be secured exteriorly to the stem 5, or it may rest against the radial arm 21 provided at said stem.

The disc 6 to which the stem 5 is secured by its top end, is positioned within an enlarged extension in the shape of a cup 22 formed at the central cylinder 1. Normally, said disc is maintained raised by the action of spring 20 which also forces the inner cylinder 15' downward, causing the enlargement 17 of stem 16 to seat on the recess 8 and thereby obturate the perforation 9.

The radial arms 21 of stem 5 have welded thereto a small ring 33 to which are pivotally connected the pins 23 in a number corresponding to the number of cartridge receiving outer cylinders 10. Said pins pass through the registering slots 2 and 11' of central cylinder 1 and cartridge receiving cylinders 10 respectively, to protrude in a position into the latter when the disc 6 and consequently the stem 5 are raised by the action of spring 20, as shown in Fig. 3.

In this position, the cartridges 24 inserted in the receiving cylinders 10 with their points downwards, are held in the loader by means of the pins 23 remaining beneath the flange 26 of the top end of cartridges 24.

Upon pressing the disc 6 to the position shown in Fig. 4, thereby causing the stem 5 to descend against the elastic tension of spring 20 resting on the inner cylinder 15, the pins 23 carried by the ring secured to the radial arms 21 of said stem will be retracted, thereby releasing the cartrides 24 which will fall. In this second position, the ends of the pins 23 will remain within the slots 2 of the central cylinder 1, to which end the latter's wall is thickened, so as to prevent the pins to fall into the central cylinder, depending from the ring carrying them.

As the pressing of disc 6 is discontinued, the spring 20 will force same to its initial position, the pins 23 thereby returning to their normal or non-retracted position.

To replace the cartridges 24, the loader is taken upside down and the cartridges are inserted in the receiving cylinders 10, with their percussion caps facing the top end of said cylinders 10, and by pressing the disc 6 so that until the pins 23 are caused to slide downward, the cartridges will penetrate completely, that is, until same rest on the closed end of cylinders 10, whereafter the pressing of the disc 6 is discontinued, the pins 23 thereby returning to the position in which their ends protrude into said cylinders and hold the cartridges 24 by their flanges.

In said ascending and descending movements of the stem 5, the stem 16 has remained inoperative, by reason of the fact that as the stem 15 is of tubular shape and it encloses the reduced portion 16' of stem 16, movement is not transmitted from one stem to the other.

The inner cylinder 15 is adapted to contain the oil 27 to be used for lubricating and cooling the revolver chambers. Said oil is enclosed in the chamber formed by the inner cylinder 15 and the bottom 7 of central cylinder 1, and normally said

oil cannot flow out through opening 9 as the latter remains obturated by the enlargement or valve 17 of stem 16.

The wall of cylinder 15 is provided with an orifice 28 in vertical alignment with another orifice 29 formed in the wall of central cylinder 1, and both orifices are not in horizontal registration whilst the inner cylinder 15 is forced downward by the action of the spring 20, as shown in Figs. 3 and 4.

To lubricate and cool a revolver chambers, the loader is placed in such a position that the projection usually carried by the magazine of a revolver rests in the lower recess 19 of the enlargement 18 of the portion 16'' of stem 16, and the loader is pressed against the top center of the revolver magazine, so that the valve 17 of stem 16 will be raised, thereby opening the perforation 9 of bottom 7 of the central cylinder 1, as shown in Fig. 5. In this position, the orifices 28 and 29 of inner cylinder 15 and central cylinder 1 will register one another thereby allowing outer air to enter, whereupon the lubricating oil 27 will flow through the perforation 9 and it will spread over the revolver chambers.

Said operation can be effected simultaneously with the reloading of the revolver; in fact, as the points 25 of the cartridges 24 are placed within the revolver magazine's chambers, the enlargement 18 will engage the rear face of the revolver's magazine, and by simply pressing the loader against the magazine and actuating the disc 6, the cartridges will be released. Upon withdrawing the loader, the enlargement or valve 17 will automatically descend to obturate the perforation 9, in which position the orifices 28 and 29 will not register one another, and at the same time the disc 6 will be raised to a position as limited by the abutment of arms 21 against the disc 3.

To fill the loader with lubricating oil, the enlargement 18 of portion 16'' of stem 16 is slightly pressed, so that the valve 17 will open the perforation 9 through which the oil is then injected.

In order to prevent stem 16 and inner cylinder 15 from rotating, thereby bringing the orifices 28 and 29 out of vertical alignment, the upper portion 16' of smaller diameter of the stem 16 has one or two peripherial plane faces 30. Corresponding plane faces are formed at the inner face of stem 5, so that as said portion 16' is inserted in stem 5, rotation of the stem 16 and inner cylinder 15 is prevented. The described arrangement is illustrated in Fig. 7.

To prevent slipping of the loader from the user's hand, the former is provided with grooved outer portions, as shown in Fig. 1, adjacently to the sides of ribs 10'.

In Fig. 8 is illustrated a modified form of the loader unprovided with the lubricator-cooler mechanism. In this modified form, all the parts are arranged similarly as in the loader previously described, except for the lubricating mechanism, and therefore the inner cylinder 15 and the stem 16 are omitted therein. In this form, the central cylinder 1' has a bottom 7' slightly higher than its lower end, so that the extension of said cylinder beneath the bottom 7' provides a chamber 32 adapted to lodge the central portion of the rear face of the revolver's magazine to facilitate the insertion of the cartridges therein. The stem 5' for actuating the pins, which is not hollow, extends lengthwise the central cylinder 1' and passes across the axial perforation of bottom 7'.

A spring 20' surrounds the stem 5' and has its lower end resting on the bottom 7' and its upper end resting against the radial arms 21' to which is secured the ring having the pins pivotally connected thereto, said spring 20' tending to raise the disc 6' to which the top end of stem 5' is secured.

The downward movement of stem 5' is limited by the striking of disc 6' against portions of the upper ends of the cartridge receiving outer cylinders.

It is obvious that changes may be made in the size, oil capacity and number of the outer cylinders, as well as in the construction details of the loader, without thereby altering the essential character of the invention, which is such as claimed hereinafter.

What I claim is:

Improvements in revolver loaders of a type adapted for simultaneously reloading and cooling or lubricating the revolver's chambers comprising, a central cylinder, a centrally apertured disc secured to the upper edge of the said central cylinder, a centrally apertured disc secured within the lower end of said cylinder, a recess surrounding the aperture on the inner side of the lower disc, outer semi-cylinders joined to said central cylinder and each cylinder constructed for normally holding a cartridge, upwardly inclined slots extending through the joint of said central cylinder and said outer semi-cylinders, a closed top inner cylinder positioned within said central cylinder thereby forming a chamber and said inner cylinder having a centrally positioned downwardly projecting supporting stem extending through the aperture of said lower disc, an intermediate radial flared portion on said supporting stem adapted to seat in the recess of said lower disc thereby closing the aperture, a centrally positioned stem projecting upwardly from said inner cylinder, a slotted stem positioned above and telescoping over said upwardly positioned stem and extending through the aperture of said upper disc and said slotted stem having a cup shaped head at its upper end and the lower slotted portion slidingly cooperating with the upwardly extending stem of said inner cylinder, arms secured to the lower portion of said slotted stem below said upper disc and extending radially therefrom and positioned to cooperate with said slots extending through the joints of said central cylinder and the outer semi-cylinders, a ring secured to the end of each radial arm, a pin pivotally connected to each ring, and of such length so as to be adapted to support a cartridge in the outer semi-cylinders, a compression spring between the closed top of said inner cylinder and said radial arms biasing them in opposite directions and a cooling or lubricating fluid in said chamber, all constructed and arranged whereby the depressing of said slotted stem head will release cartridges supported by said pins and the depression of inner cylinder supporting stem inwardly will release said fluid to cool or lubricate a cylinder of a revolver.

HÉCTOR CONSUEGRA LIMA.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
2,396,184	Lima	Mar. 15, 1946
2,406,231	Lima	Aug. 20, 1946
2,406,232	Lima	Aug. 20, 1946