SPECIFICATION

Loader for a firearm such as a machine-pistol and similar

The present invention relates to a loader for a firearm such as a machine-pistol and similar.

The effeciency of a machine-pistol depends largely on the capacity of the loader provided therefor. Now, this capacity is principally limited by dimensional restrictions, i.e. the weapon provided with its loader requires a convenient transportability, a compactness, the allowance of any shooting position on the field and the like.

From a long time, this problem has given rise to numerous suggestions. The latter may be classified into two groups in relation either with the particular morphology of the ammunition or with a particular arrangement of the loader, the ammunition being a conventional one.

The present invention being related to the second group, only the latter will be described hereafter, it being however understood that it is not excluded to adapt the loader according to the present invention to a new ammunition.

As described hereabove, the capacity of the loader is limited principally owing to the space occupied. Another limitation results from the difficulty of obtaining, from a certain capacity, a correct transportation of the cartridges through the loader when shooting and inversely, an easy filling up of said loader.

An interesting solution has been shown in the U.S. Patent No. 2 624 241. It comprises providing a relatively long loader one end of which has a loading-feeding opening. Said loader is designed to be secured on the upper portion of the body of the weapon and in this axis thereof, said opening being located at right angles with a feeding area. The latter comprises a cylinder-shaped transfer member actuated through the bolt and being intended to receive every time a cartridge for pivoting it on 90°. thereby bringing it into the axis of the chamber.

However, the arrangements described in the above U.S. Patent have numerous drawbacks.

Firstly, the capacity of the known loader is still limited in that, because the ammunition is ejected from the loader through one of the ends thereof, it may extend only from behind the breach, *i.e.* from about the mid-length of the body towards the rear portion thereof or in a plane perpendicular to the axis of the weapon and tangential to the free edge of the chamber. With such a loader, it is difficult to obtain a correct and reliable feeding of the ammunition, except when limiting the length of the loader. In addition, the centre of gravity of the loader and thus that of the weapon varies according to the number of cartridges in the loader.

According to the present invention there is provided a loader for a firearm such as a machine-pistol and similar, comprising a prismatic tube closed at both ends and having, in the central portion of one of its longitudinal walls, a loading-feeding port, two symmetrical conveying devices for moving ammunition in the tube towards said port being provided within the said tube and bearing each on an end wall of the latter, and means adjacent said port for feeding or guiding ammunition through the port alternately from each side of the port.

An embodiment of the invention will now be described, by way of an example, with reference to the accompanying drawings, in which:

Figure 1 is a side view of a machine-pistol provided with a loader according to the invention;

Figure 2 is an axial section on an enlarged scale of the portion indicated by F2 in Fig. 1;

Figure 3 is a view taken in the direction of the arrow F3 of Fig. 2; and

Figure 4 shows a portion of Fig. 2, the loader being however emptied of the ammunition.

The machine-pistol shown in Fig. 1 comprises a body 1, a gun 2, a handle 3 with a trigger 4 and a telescopic shoulderpiece 5.

The loader 6 according to the invention is arranged to be secured on the upper side of the body 1 through any suitable means as shown diagrammatically at 7 and 8.

The loader 6 is in the form of a tube having a substantially rectangular cross-section and obturated at its both ends. The longitudinal wall 9 arranged to be applied against the body 1 is provided in its central portion with a port 10 allowing the introduction and the ejection of the cartridges 11. An index (not shown) locks the cartridges 11 within the loader 6, said index being retracted when the loader 6 is installed on the weapon.

The inner side 12 of wall 9 has two ramps 13 and 14 reaching each a solid mass 15 and 16 respectively provided at opposite sides of the part 10.

The shortest distance between each of said solid masses 13 and 16 and the opposite inner side 17 of the loader 6 is very slightly longer than the greatest outer diameter of the ammunition 11, whereas the distance between the inner sides 12 and 17 from the foot of the ramps 13 and 14 and up to the ends of the tube is slightly less than twice the said diameter.

The inner side 17 has a guiding projection 18 at right angles with the port 10.

At each end of the loader a spring 19 urges a conveyor 20 towards the centre of the loader 6 and bears against the respective end closure of the tube.

Each conveyor 20 comprises a first cylindrical body 21 provided with a longitudinal tail 22 surrounded by the spring 19, and a sec-

ond cylindrical body 23 connected with the first body 21 and pivoting thereon. These connections and linkages are obtained through two arms 24 and 25 integral with the body 23 and carrying each a finger 26 and 27 respectively. Each of said fingers 26, 27 engages an oblong groove 28 and 29 respectively provided therefor in the corresponding end face of the body 21.

Each of the said solid masses 15 and 16 has a cylindrical recess 30 in which is freely pivotable a body with several vanes 31 the purpose of which is to reliably eject the ammunition 11 through the port 10 by taking them alternately from the left and right portions of the loader.

The bodies 23 not only eject the two last ammunition 11, but they also facilitate the filling up of the loader 6 by maintaining the correct relative position of the vanes 31.

Through these arrangements, there is obtained a loader having an optimum capacity and the centre of gravity of which does not vary when shooting without substantially affecting the space occupied by the weapon, while providing a very reliable feeding of the latter.

It is apparent that the above described loader may be modified without departing from the scope of the invention as defined in the appended claims.

CLAIMS

1. A loader for a firearm such as a machine-pistol and similar, comprising a prismatic tube closed at both ends and having, in the central portion of one of its longitudinal walls, a loading-feeding port, two symmetrical conveying devices for moving ammunition in the tube towards said port being provided within the said tube and bearing each on an end wall of the latter, and means adjacent said port for feeding or guiding ammunition through the port alternately from each side of the port.

2. A loader as claimed in claim 1, in which the inner side of the said wall provided with the port, is located relative to the inner side of the opposite wall at a distance slightly less than twice the calibre of the ammunition being contained in the said loader.

3. A loader as claimed in claim 1 or claim 2, in which the said inner side of the said wall provided with the port is provided, in close vicinity to the said port, with two ramps reaching each a solid mass, said solid masses being positioned one at each of two opposite sides of said port, the shortest distance between said solid masses and the inner opposite side which is provided with a biconcave projection at right angles with the said port being slightly greater than the calibre of the ammunition.

4. A loader as claimed in any preceding claim, in which each of said conveying devices comprises a spring bearing on a corresponding end closure of the tube which drives along the tube a first cylindrical body with which is rotatably and movably connected a second cylindrical body.

5. A loader as claimed in claim 4, in which the said first and second cylindrical bodies each have a diameter corresponding to the calibre of the ammunition.

6. A loader as claimed in claim 3 or claim 4 or claim 5 when dependent upon claim 3, in which each of said solid masses has a cylindrical recess in which is freely pivotable a multi-vaned body, the surface connecting two successive vanes being cylindrical, in accordance with the calibre of the ammunition, said multi-vaned bodies constituting said feed or guiding means.

7. A loader for a firearm such as a machine-pistol and similar, substantially as hereinbefore described with reference to and as illustrated in the accompanying drawings.

8. A firearm, such as a machine-pistol and similar, provided with a loader as claimed in any preceding claim.

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