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(19)

(54) A WEAPON WHICH CAN BE SUPPLIED WITH CARTRIDGES BY A CARTRIDGE BELT OR ALTERNATIVELY BY A CARTRIDGE MAGAZINE

(71) We, FABRIQUE NATIONALE HERSTAL S.A., en abrégé F.N., a body corporate organized and existing under the laws of Belgium, of 4400 Herstal, Belgium, do hereby declare the invention for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to a weapon which is normally arranged to be supplied with cartridges by a cartridge belt. More particularly, the invention is concerned with weapons, such as machine guns.

Modern machine guns, due to their light weight and handling facility, are liable to be used in military units in which the individual firearms fire similar ammunition to that u sed in the cartridge belts of the machine guns.

This ammunition used in the individual firearms is contained in magazines, and it is of interest for a machine gun, after having exhausted it supply of cartridge belts, to be able to continue to operate whilst being supplied, for instance, by a cartridge magazine normally used in rifles.

According to the present invention there is provided a weapon which can be supplied with cartridges by a cartridge belt or alternatively by a cartridge magazine, said weapon being provided with a lateral opening through which extends a member forming a carrier for a magazine, said member being provided at an outer end with a flap member biased towards a position in which it closes off said outer end when no magazine is present, said flap member when in the closed position forming a guide for guiding a cartridge belt when present, and the bolt of the weapon having two projections, one projection being arranged to act upon successive cartridges of a cartridge belt when present, and the other projection being arranged to act upon successive cartridges of a magazine when present.

Over and above the interest offered by the double supply device, it is also important that, despite the more elaborate equipment, the aiming system of the weapon need not be altered.

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

Figure 1 schematically shows a perspective view of a weapon in which the cartridges are supplied by a cartridge belt;

Figure 2 is similar to Figure 1, the same weapon being however provided with a cartridge magazine;

Figure 3 is a side view, to a larger scale, of the weapon according to Figures 1 and 2, but without a cartridge supply belt or cartridge magazine;

Figure 4 is an enlarged view of that part of Figure 3 enclosed within the rectangle indicated by F4;

Figure 5 is a section taken along the line V-V of Figure 4;

Figure 6 is similar to Figure 5, but on a larger scale, the bolt being associated with a cartridge belt;

Figure 7 is similar to that of Figure 6, the weapon being shown provided with a cartridge magazine;

Figure 8 is similar to that of Figure 7, illustrating the alternate loading when using a cartridge magazine;

Figure 9 is a view taken the direction of arrow F9 indicated in Figure 4, more particularly showing the locking ring of the barrel; and

Figure 10 is a section taken along the line X-X indicated in Figure 9.

In the illustrated embodiment, there is shown a modern machine gun 1 which can be fed with cartridges 2 by a cartridge belt, as shown in Figure 1, or which can be fed with cartridges by a magazine 12, as shown

in Figure 2. In the present case, the means which permit the supply of cartridges 2 from a belt are known and are consequently characteristic of known machine guns. The cartridges 2 are forwarded in the usual manner by the belt towards the loading device and are pushed on, one at a time, by a projection 3 provided on a bolt 4.

According to the invention, an opening 5 has in this case been provided in the left hand side of the casing 6 of the weapon 1. In the opening 5 is received a sleeve 7 which is intended to serve as a magazine carrier. At the entrance to the sleeve 7, a substantially L-shaped flap 8 is hingedly attached. Portion 8′ of said flap 8 has a tooth 9 and said flap 8 is urged to a closed position by a resilient element 10. The bolt 4 is provided with an extra projection 11.

In the position illustrated in Figure 6, the sleeve 7 is closed by the portion 8′ of flap 8, the second portion 8″ of the flap 8 being directed towards the cartridge belt, so as to form a guide facilitating the regular forwarding of the successive rounds 2 aligned on the belt.

In the magazine feed condition, it will be sufficient to enter a normal rifle magazine 12 into the sleeve 7, whereby the flap 8 is automatically pushed back. The magazine 12 will be held in place by the tooth 9 which registers with an opening 13 in the magazine 12.

It will be seen that the bolt 4 is movable along guide rails 14 and 15 so as to assure the normal and successive action upon the cartridges.

It is quite obvious, that during the supply of cartridges from the magazine 12, the supply system contained in cover 16 for moving a cartridge belt continues to operate without a belt being present.

The magazine 12 is placed laterally of the weapon and not vertically on the cover 16. This arrangement permits the sighting line to remain unaltered and considerably simplifies the fitting of aiming accessories such as telescopic sights, a reflex collimator, a light amplifier or others.

It must be further noted, that the closing flap 8 of the magazine guide sleeve 7 has a double function. It is first used to close the opening 5 in casing 6 so as to ensure a better sealing of the weapon, and it further serves as stop for the magazine 12 when entered into the sleeve 7.

The weapon can be easily changed instantaneously, either to belt feed or to magazine feed.

In order to limit the angular movement of said flap 8, portion 8″ of the flap 8 is provided with a projection 17 which normally, and in the closed position of said flap 8, comes into contact with the outer surface of the sleeve 7.

WHAT WE CLAIM IS:—

1. A weapon which can be supplied with cartridges by a cartridge belt or alternatively by a cartridge magazine, said weapon being provided with a lateral opening through which extends a member forming a carrier for a magazine, said member being provided at an outer end with a flap member biased towards a position in which it closes off said outer end when no magazine is present, said flap member when in the closed position forming a guide for guiding a cartridge belt when present, and the bolt of the weapon having two projections, one projection being arranged to act upon successive cartridges of a cartridge belt when present, and the other projection being arranged to act upon successive cartridges of a magazine when present.

2. A weapon as claimed in claim 1, in which said flap member is substantially L-shaped and is hingedly mounted on a pivot pin on the carrier member, said flap member being being biased towards its closed position by resilient means.

3. A weapon as claimed in claim 1 or claim 2, in which the flap member is provided with a projection which when the flap member is in the open position can engage in an opening in a magazine when inserted into the carrier member to retain the magazine therein.

4. A weapon as claimed in claim 2 or claim 3 when dependent upon claim 2, in which one limb portion of the L-shaped flap member is provided with a protrusion which is capable of limiting the angular movement which brings the other limb portion to its closed position.

5. A weapon as claimed in any of claims 2 to 4, in which the angular spacing between the two limb portions of the L-shaped flap member is such that one of the limb portions functions as a guide for a cartridge belt when the other limb portion is in the position for closing off the carrier member.

6. A weapon which can be supplied with cartridges by a cartridge belt or alternatively by a cartridge magazine, substantially as hereinbefore described with reference to and as illustrated in the accompanying drawings.

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in Figure 2. In the present case, the means which permit the supply of cartridges 2 from a belt are known and are consequently characteristic of known machine guns. The cartridges 2 are forwarded in the usual manner by the belt towards the loading device and are pushed on, one at a time, by a projection 3 provided on a bolt 4.

According to the invention, an opening 5 has in this case been provided in the left hand side of the casing 6 of the weapon 1. In the opening 5 is received a sleeve 7 which is intended to serve as a magazine carrier. At the entrance to the sleeve 7, a substantially L-shaped flap 8 is hingedly attached. Portion 8′ of said flap 8 has a tooth 9 and said flap 8 is urged to a closed position by a resilient element 10. The bolt 4 is provided with an extra projection 11.

In the position illustrated in Figure 6, the sleeve 7 is closed by the portion 8′ of flap 8, the second portion 8″ of the flap 8 being directed towards the cartridge belt, so as to form a guide facilitating the regular forwarding of the successive rounds 2 aligned on the belt.

In the magazine feed condition, it will be sufficient to enter a normal rifle magazine 12 into the sleeve 7, whereby the flap 8 is automatically pushed back. The magazine 12 will be held in place by the tooth 9 which registers with an opening 13 in the magazine 12.

It will be seen that the bolt 4 is movable along guide rails 14 and 15 so as to assure the normal and successive action upon the cartridges.

It is quite obvious, that during the supply of cartridges from the magazine 12, the supply system contained in cover 16 for moving a cartridge belt continues to operate without a belt being present.

The magazine 12 is placed laterally of the weapon and not vertically on the cover 16. This arrangement permits the sighting line to remain unaltered and considerably simplifies the fitting of aiming accessories such as telescopic sights, a reflex collimator, a light amplifier or others.

It must be further noted, that the closing flap 8 of the magazine guide sleeve 7 has a double function. It is first used to close the opening 5 in casing 6 so as to ensure a better sealing of the weapon, and it further serves as stop for the magazine 12 when entered into the sleeve 7.

The weapon can be easily changed instantaneously, either to belt feed or to magazine feed.

In order to limit the angular movement of said flap 8, portion 8″ of the flap 8 is provided with a projection 17 which normally, and in the closed position of said flap 8, comes into contact with the outer surface of the sleeve 7.

WHAT WE CLAIM IS:—

1. A weapon which can be supplied with cartridges by a cartridge belt or alternatively by a cartridge magazine, said weapon being provided with a lateral opening through which extends a member forming a carrier for a magazine, said member being provided at an outer end with a flap member biased towards a position in which it closes off said outer end when no magazine is present, said flap member when in the closed position forming a guide for guiding a cartridge belt when present, and the bolt of the weapon having two projections, one projection being arranged to act upon successive cartridges of a cartridge belt when present, and the other projection being arranged to act upon successive cartridges of a magazine when present.

2. A weapon as claimed in claim 1, in which said flap member is substantially L-shaped and is hingedly mounted on a pivot pin on the carrier member, said flap member being being biased towards its closed position by resilient means.

3. A weapon as claimed in claim 1 or claim 2, in which the flap member is provided with a projection which when the flap member is in the open position can engage in an opening in a magazine when inserted into the carrier member to retain the magazine therein.

4. A weapon as claimed in claim 2 or claim 3 when dependent upon claim 2, in which one limb portion of the L-shaped flap member is provided with a protrusion which is capable of limiting the angular movement which brings the other limb portion to its closed position.

5. A weapon as claimed in any of claims 2 to 4, in which the angular spacing between the two limb portions of the L-shaped flap member is such that one of the limb portions functions as a guide for a cartridge belt when the other limb portion is in the position for closing off the carrier member.

6. A weapon which can be supplied with cartridges by a cartridge belt or alternatively by a cartridge magazine, substantially as hereinbefore described with reference to and as illustrated in the accompanying drawings.

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