April 7, 1942. A. GERSTENBERGER 2,278,438

WEAPON HAVING MULTIPLE LOAD MAGAZINE

Filed April 17, 1939 2 Sheets-Sheet 1

Fig. 1.

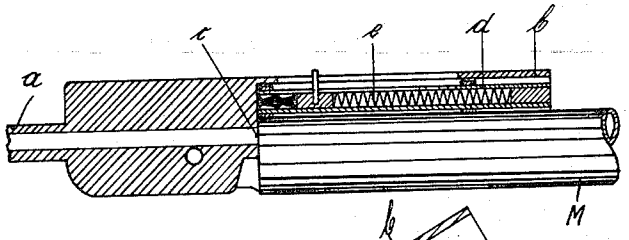


Fig. 3.

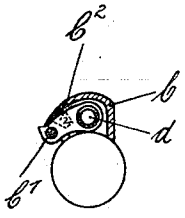


Fig. 2.

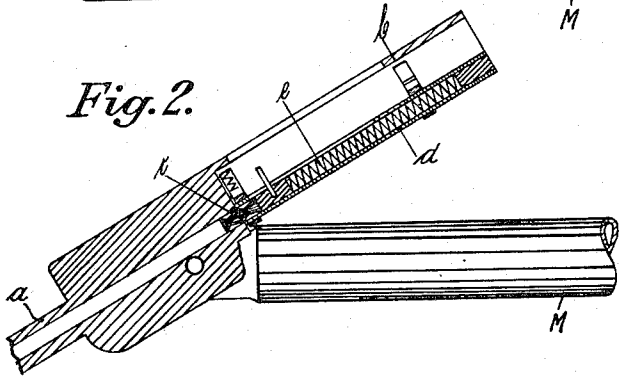


Fig. 4.

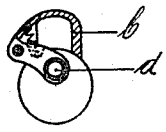


Fig. 5.

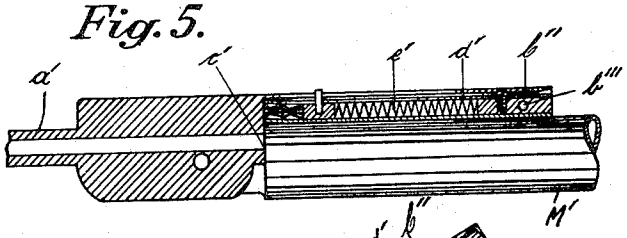
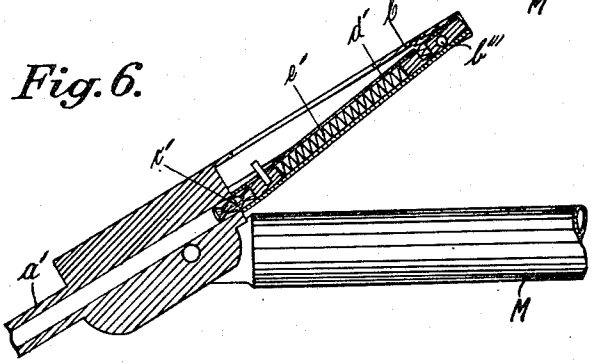


Fig. 6.



A. Gerstenberger Inventor:
by Thomas Howe atty.

April 7, 1942. A. GERSTENBERGER 2,278,438

WEAPON HAVING MULTIPLE LOAD MAGAZINE

Filed April 17, 1939 2 Sheets-Sheet 2

Fig. 7.

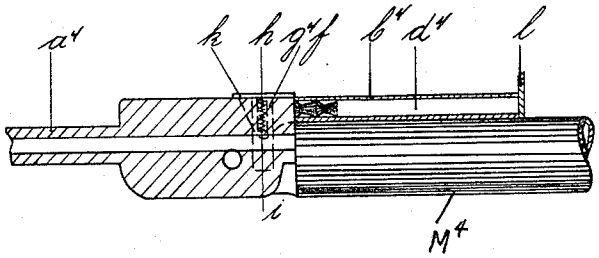


Fig. 8.

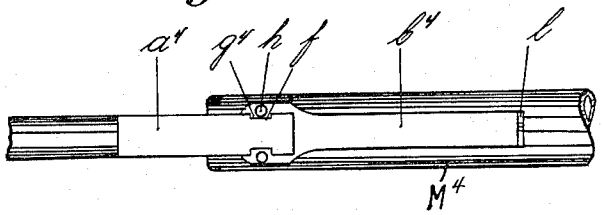
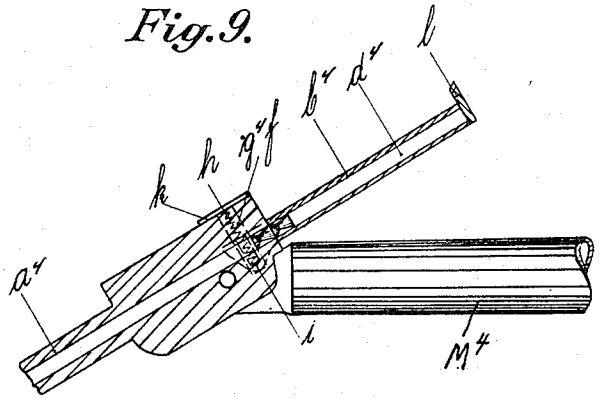


Fig. 9.



A. Gerstenberger Inventor:
by Thomas Howe Atty.

Patented Apr. 7, 1942 2,278,438

UNITED STATES PATENT OFFICE

2,278,438

WEAPON HAVING MULTIPLE LOAD MAGAZINE

Albin Gerstenberger, Zella-Mehlis, Thuringia, Germany

Application April 17, 1939, Serial No. 268,319
In Germany April 22, 1938

2 Claims. (Cl. 124—15)

The present invention relates to a weapon having a multiple-load magazine and more particularly to a weapon in which a part thereof is adapted to be tilted for the purpose of exposing the loading operation of the barrel, or is otherwise movable.

According to the invention the magazine is attached to the movable part of the weapon in such a manner that it is moved to a position in front of the said loading opening by the movement of the said movable part of the weapon, which movement is carried out in order to expose the said opening of the barrel, whilst the return movement of the magazine to its initial position is due to the closing movement of the said movable part. The said part, which is movable for the purpose of exposing the loading opening of the barrel, may consist of, for instance, the barrel itself as in the case with weapons equipped with tiltable barrels, but may also be a block or the like which is movable transverse to the axis of the barrel and is arranged between the rear end of the barrel and the breech elements.

In contradistinction to the tubular multiple-load magazines known heretofore, the multiple-load magazine according to the invention affords the advantage of being adapted to be applied to single-load weapons of known type so that these weapons may be converted into multiple-load weapons without necessitating any other change or alteration, but may also be used as single-load weapons. Furthermore, the magazine according to the invention is advantageous inasmuch as the back-sight may be provided on the parts constituting the magazine or carrying the same whereby the length of the line between fore-sight and back-sight is increased, thus rendering possible a greater precision of shooting since both the fore-sight and back-sight are rigidly connected to the barrel in that way.

The multiple-load magazine according to the invention is suitable both for air-guns and for fire-arms.

Some embodiments of the magazine according to the invention are shown by way of example in the accompanying drawings as being applied to air-guns.

In the embodiment according to Figures 1 to 4 the magazine is arranged on the tiltable barrel and is rotatable in lateral direction around an axis;

Figure 1 is a longitudinal section through the essential parts, the barrel being in its normal position,

Figure 2 is a section in the same plane, the barrel being, however, tilted for being loaded, and

Figures 3 and 4 are transverse partial cross-sections.

Figures 5 and 6 are intended to illustrate the magazine according to another embodiment of the invention and are also longitudinal sectional views showing the barrel in its normal position and in its loading position respectively, the magazine being tiltable around an axis which is situated at the rear end of the magazine housing.

Figures 7 to 9 illustrate a third form of the invention and

Figures 7 and 9 are again longitudinal sectional views showing the barrel in its normal and loading positions respectively, whilst

Figure 8 is a plan view from above. In this instance the magazine is movable parallel with the axis of the bore of the barrel.

In the constructional form according to Figures 1 to 4 the barrel a carries a magazine housing b within which the magazine proper d is arranged so as to be movable in a direction towards and away from the loading opening c of the barrel. For this purpose the magazine d is so arranged that it may be rotated around an axis b^1 (see Figures 3 and 4) situated laterally of the barrel. When the barrel is tilted in order to clear the loading opening c thereof, a spring b^2 arranged on the magazine housing b, acts upon the magazine so that the latter is moved around the axis b^1 to a position immediately in front of the loading opening, so that the next following round is caused to enter the barrel by the action of a spring e provided in the magazine, or by gravity. After the loading operation has been completed, the barrel a is moved back to its normal position and the magazine d is also moved back into its initial position through the opposed action of suitable fixed or rigid parts of the weapon, such as the air cylinder M, against the resistance of spring b^2

In the constructional form shown in Figures 5 and 6 the magazine housing b'' is also arranged upon the tiltable barrel a' and comprises the magazine proper d' which is in this instance movable around an axis $b^{1''}$ arranged at the rear end of the magazine housing. When the barrel a' is tilted in order to clear the loading opening c' (see Fig. 6), the front end of the magazine is freed so that it may be spring-pressed downwardly to a point situated in front of the loading opening of the barrel. When the barrel is moved back its normal position, the magazine is also returned to its initial position shown in Figure 5

against the spring action preferably bearing against the air cylinder M'. In order to facilitate with this constructional form, the entry of the rounds into the barrel from the magazine, the latter is slightly bent at its forward end so that its axis is as near as possible in line with the axis of the bore of the barrel.

A third constructional form of the invention is illustrated in Figures 7 to 9. As in the previously described embodiments the magazine housing b^4 and the magazine d^4 are attached to the barrel a^4, the arrangement being such that the magazine is adapted to move parallel with the axis of the bore of the barrel when the latter is tilted. Guides f are provided at the rear end of the barrel a^4, which guides are adapted to cooperate with suitable projections g^4 arranged on the magazine housing b^4. Furthermore, the magazine housing b^4 is provided with helical springs h at both sides of the projections g^4, said springs h being supported at their lower ends by the bottom of the bore i containing them, and at their upper end by a cover k arranged upon the barrel.

When the barrel is tilted for the purpose of loading the magazine housing b^4 is released from the non-moving parts as air cylinder m^4 of the weapon and moves downwardly and in parallel alignment with the axis of the barrel to a point situated in front of the loading opening, such movement being caused by the action of the springs h. When the barrel moves back to its normal position, the magazine housing b^4 abuts against the non-moving parts of the gun, preferably immediately adjacent the springs h and guides f, and resumes the position of rest shown in Figure 7 the movement being guided by its projections g in the guides f against the action of the springs h.

In order to obtain (especially with small-arms) a sighting line of the greatest possible length between back and fore-sights and thus to increase the precision of shooting, the back-sight l is provided at the rear end of the magazine housing b^4 which is equivalent to mounting the back-sight directly on the barrel since the magazine housing effectively forms a part thereof.

What I claim and desire to secure by Letters Patent of the United States is:

1. A weapon comprising a barrel and a movable part, means pivoting said barrel and part together, the said part covering the bore of said barrel in one relative position of said barrel and part, and said part uncovering the said bore in another relative position of said barrel and part, a magazine having an ammunition space and constituting the entire ammunition storage container outside the barrel, of the weapon, the entire ammunition space in said magazine being an elongated continuous chamber affording a continuous passage for ammunition from one of its ends to the other at all times, means movably securing said magazine to said barrel, said magazine having its longitudinal axis movable with relation to the barrel bore axis and said magazine being movable into and out of registry with the barrel bore, spring means tending to move said magazine into registry with the barrel bore, said part lying in the path of movement of said magazine as said barrel and part are relatively moved about said pivoting means, said part abutting against said magazine to hold said magazine out of registry with the barrel bore when said bore is covered by said part, said magazine moving under the influence of said spring means into registry with said barrel bore when said part is moved to uncover said bore.

2. A weapon comprising a barrel and a movable part, means pivoting said barrel and part together, the said part covering the bore of said barrel in one relative position of said barrel and part, and said part uncovering the said bore in another relative position of said barrel and part, a magazine, means slidably securing said magazine at one end to said barrel whereby said magazine may move transversely with relation to said barrel into and out of registry with the barrel bore, and spring means tending to move said magazine into registry with the barrel bore, said part lying in the path of movement of said magazine as said barrel and part are relatively moved about said pivoting means, said part abutting against said magazine to hold said magazine out of registry with the barrel bore when said bore is covered by said part, said magazine moving under the influence of said spring means into registry with the said barrel bore when said part is moved to uncover said bore.

ALBIN GERSTENBERGER.