Maneuver cartridge device and self-loading firearm suitable for this purpose

Description

[0001] The invention relates to a maneuver cartridge device for use in a self-loading firearm, comprising a barrel extending from a chamber to a muzzle and having an intercepting device arranged on the muzzle side for intercepting a projectile.

[0002] European patent document EP 1 490 644 B1 discloses a maneuver cartridge device. The intercepting device serves to hold projectiles of live ammunition that might be inadvertently fired instead of maneuver cartridges during maneuvers if the safety regulations are not followed and if the safety devices are circumvented.

[0003] The intercepting device is normally integrated into the maneuver cartridge apparatus.

[0004] Especially in case of self-loading firearms with high firing rates of up to 1200 rounds per minute, it has been found that, if live ammunition is inadvertently fired, numerous shots might fired be before the user can react and stop the shooting.

[0005] With an eye towards the safety of users and their surroundings as well as with an eye towards preventing the self-loading firearm from being damaged or destroyed in the case of the inadvertent firing of live ammunition, it is the objective of the present invention to put forward a maneuver cartridge device that allows a self-loading firearm to be safely handled in case live rounds are inadvertently fired.

[0006] ~~This objective is achieved~~An embodiment according to the invention ~~in that, with~~provides a maneuver cartridge device of the above-mentioned type, the barrel has a first section that adjoins the chamber as well as a first cross section that is adapted to the caliber of the projectile, and in that the barrel has a second section that adjoins the first barrel section as well as a second cross section that is larger than the first cross section.

[0006a] An embodiment according to the invention provides a maneuver cartridge device for use in a self-loading firearm, comprising a barrel extending from a chamber to a muzzle and having an intercepting device arranged on the muzzle side for intercepting a projectile, characterized in that the barrel has a first section that adjoins the chamber as well as a first cross section that is adapted to the caliber of the projectile, and in that the barrel has a second section that adjoins the first barrel section as well as a second cross section that is larger than the first cross section.

[0021] Another preferred embodiment provides that the intercepting device has a display element that can be moved relative to the barrel by means of a projectile, thus displaying that a projectile has been intercepted.

[0022] Preferably, the display element can be moved in the firing direction, so that the kinetic energy of a projectile can be utilized to move the display element. The display element entails the advantage that, in case of a malfunction, a user can immediately ascertain whether this malfunction can be traced back to the unintentional shooting of live ammunition while using the safety maneuver cartridge barrel.

[0023] In addition, when the causes of damage to the weapon or of a safety-relevant incident during shooting using maneuver ammunition are being investigated, such a display element constitutes a direct indicator of the unauthorized use of live ammunition with this safety maneuver cartridge barrel.

[0024] ~~The invention~~An embodiment of the invention also relates to a self-loading firearm, especially a machine gun, using a maneuver cartridge device of the type described above.

[0025] Additional features and advantages of the invention are the subject matter of the description below and of the drawings depicting preferred embodiments.

[0026] The drawings show the following:

[0027] Figure 1 a longitudinal sectional view of a first embodiment of a maneuver cartridge device with an empty chamber;

[0028] Figure 2 a longitudinal sectional view of a second embodiment of a maneuver cartridge device when a maneuver cartridge is used;

[0029] Figure 3 a view corresponding to Figure 2 when a live cartridge is used;

[0030] Figure 4 a longitudinal sectional view of an embodiment of an intercepting device showing a display element in the initial state; and

Claims

1. A maneuver cartridge device (10) for use in a self-loading firearm, comprising a barrel (12) extending from a chamber (14) to a muzzle (16) and having an intercepting device (20) arranged on the muzzle side for intercepting a projectile, characterized in that the barrel (12) has a first section (22) that adjoins the chamber (14) as well as a first cross section (32) that is adapted to the caliber of the projectile, and in that the barrel has a second section (24) that adjoins the first barrel section (22) as well as a second cross section (36) that is larger than the first cross section (32).

2. The maneuver cartridge device (10) according to claim 1, characterized in that the second barrel section (24) is longer than the first barrel section (22).

3. The maneuver cartridge device (10) according to one of the preceding claims, characterized in that the first barrel section (22) has a minimum length that is dimensioned in such a way that, when the maneuver cartridge (45) has been inserted state into the chamber (14), the tip (27) of the maneuver cartridge (45) does not extend into the second barrel section (24).

4. The maneuver cartridge device (10) according to one of the preceding claims, characterized in that the second barrel section (24) is hollow-cylindrical.

5. The maneuver cartridge device (10) according to one of the preceding claims, characterized in that the barrel (12) has a gas outlet (46) in the area of the second barrel section (24) in order to drive a self-loading mechanism of a self-loading firearm, and in that the intercepting device (20) has an intercepting element (50) with an intercepting surface (42) that is arranged adjacent to the gas outlet (46) so that the gas outlet (46) can be blocked by a projectile that has been intercepted by the intercepting device (20).

6. The maneuver cartridge device ~~(10)~~ according to claim 5, characterized in that the intercepting surface ~~(42)~~ has a depression ~~(44)~~ that serves to at least partially hold a projectile.

7. The maneuver cartridge device ~~(10)~~ according to claim 5 or 6, characterized in that the intercepting element ~~(50)~~ is arranged inside a part of the barrel ~~(12)~~ located on the muzzle side.

8. The maneuver cartridge device ~~(10)~~ according to one of claims 5 to 7, characterized in that the intercepting element ~~(50)~~ is or can be attached to the barrel ~~(12)~~ by means of a maneuver-cartridge attachment ~~(40)~~ that protrudes beyond the muzzle ~~(16)~~ of the barrel ~~(12)~~.

9. The maneuver cartridge device ~~(10)~~ according to one of the preceding claims, characterized in that the intercepting device ~~(20)~~ has a display element ~~(64)~~ that can be moved relative to the barrel ~~(12)~~ by means of a projectile, thus displaying that a projectile has been intercepted.

10. A self-loading firearm, especially a machine gun, having a maneuver cartridge device ~~(10)~~ according to one of the preceding claims.