Cartridge

The invention relates to a cartridge having a projectile, and a case which is mounted on the projectile from behind and which has a case mouth at the front end, wherein the projectile has a tip, and at the rear this tip merges into a circumferential front guide band which defines the outside diameter of the projectile, and directly adjoining this front guide band in the direction of the projectile base, a circumferential case mouth receiving space which extends in the axial direction of the projectile and in which the case mouth engages is situated in the projectile.

This type of projectile is known from EP 1 774 251 B1.

Embodiments of the invention seek to improve a cartridge in such a way that the twistless freebore is reduced to a minimum during firing. Likewise, the aim is to build up the gas pressure early. A further aim, among others, is to seal off the case mouth with respect to the projectile against any form of moisture.

According to an aspect of the present invention, there is provided a cartridge comprising a projectile and a case, a front end of the case having a case mouth, the projectile having a tip and a circumferential front guide band, the tip merging into the front guide band, the projectile having a circumferential case mouth receiving space directly adjoining the front guide band and extending in an axial direction of the projectile toward a base of the projectile, the projectile having a circumferential rear guide band between the case mouth receiving space and the base of the projectile, the front guide band and the rear guide band defining an outside diameter of the projectile, the case mouth engaging the projectile in the case mouth receiving space, an exposed portion of the case mouth receiving space extending in the axial direction of the projectile being situated between the front guide band and the case mouth, and the case mouth not completely filling the case mouth receiving space in the direction of the tip of the projectile.

Due to an exposed portion of the case mouth receiving space which extends in the axial direction of the projectile being situated between the front guide band and the case mouth, i.e., the case mouth not completely filling the case mouth receiving space in the direction of the nose of the projectile, the front guide band is shifted forward toward the tip, as the result of which the twistless freebore may be reduced to a minimum. In addition, a receiving space is thus created which may be filled with a

Claims

1. A cartridge comprising a projectile and a case, a front end of the case having a case mouth, the projectile having a tip and a circumferential front guide band, the tip merging into the front guide band, the projectile having a circumferential case mouth receiving space directly adjoining the front guide band and extending in an axial direction of the projectile toward a base of the projectile, the projectile having a circumferential rear guide band between the case mouth receiving space and the base of the projectile, the front guide band and the rear guide band defining an outside diameter of the projectile, the case mouth engaging the projectile in the case mouth receiving space, an exposed portion of the case mouth receiving space extending in the axial direction of the projectile being situated between the front guide band and the case mouth, and the case mouth not completely filling the case mouth receiving space in the direction of the tip of the projectile.

2. The cartridge according to Claim 1, wherein the exposed portion of the case mouth receiving space is sealed off with a sealing means.

3. The cartridge according to Claim 1 or 2, wherein the tip of the projectile merges via one or more shapes into the front guide band, on the outside diameter of the projectile, in an ogival or conical manner.

4. The cartridge according to one of Claims 1 to 3, wherein the exposed portion of the case mouth receiving space merges into the front guide band in a concave, convex, or linear manner.

5. The cartridge according to Claim 4, wherein the exposed portion of the case mouth receiving space merges linearly into the front guide band at an angle of less than or equal to 16 degrees with respect to the axial direction of the projectile.

6. The cartridge according to one of Claims 1 to 5, wherein the projectile transitions from a radially lowest location in the case mouth receiving space toward a rear of the projectile, in a concave, convex, or linear manner to the outside diameter of the projectile.

7. The cartridge according to one of Claims 1 to 6, wherein a receiving space containing a material that produces a tracer upon initiation is situated at a rear of the projectile.

8. The cartridge according to one of Claims 1 to 7, wherein a borehole, which is coaxial with respect to an axis of the projectile, is provided in the projectile, the borehole being open toward the tip of the projectile, and a projectile core made of tungsten carbide is situated in the borehole, and the borehole is closed by a projectile tip insert made of titanium, an outer shell of the projectile tip insert being a part of the tip of the projectile.

9. The cartridge according to Claim 2, wherein the sealing means comprises a lacquer.