Firing apparatus with adjustable pressure difference in the firing barrel for rocket artillery or rifles

The invention relates to a firing apparatus for firing cartridges, in particular rifle cartridges, with an ammunition magazine for receiving the cartridges and a firing barrel in front of the ammunition magazine in firing direction.

Such firing apparatuses are for example rifles or rocket artillery. In case of rifles, the issue arises that ammunition for hares, for instance, is too weak for a wild boar and would not kill the wild boar instantly. If ammunition for wild boars were to be used for the hare hunt, however, this would be far too strong, and would kill the hare instantly but make it unfit for human consumption. In case of rocket artillery, it would be beneficial to practice the ballistic flight for instance with rifle ammunition.

The object of the invention is thus to improve a firing apparatus according to the generic concept of claim 1, in such a way that the pressure difference in the firing barrel in the high-pressure range, i.e. in front of the ammunition magazine, as well as in the low-pressure range, i.e. in the firing direction in front of the high-pressure range, can be easily adjusted to the requirements.

Summary

In one aspect, the present invention is directed to a firing apparatus for the firing of cartridges (1), in particular rifle cartridges, comprising an ammunition magazine (2) for receiving the cartridges (1) and a firing barrel (5) in front of the ammunition magazine (2) in firing direction, characterized by a high-pressure chamber (3) which surrounds the rear end of the firing barrel (5) when seen in firing direction, a low-pressure chamber (4) which is arranged in front of the high-pressure chamber (3) when seen in firing direction and which surrounds the firing barrel (5), high-pressure bores (5a) in the firing barrel (5) in the area of the high-pressure chamber (3), said bores connecting the interior of the firing barrel (5) to the high-pressure

chamber (3), and rear and front low-pressure bores (5b) when seen in firing direction in the firing barrel (5) in the area of the low-pressure chamber (4), said bores connecting the interior of the firing barrel (5) to the low-pressure chamber (4), with a blow-out channel (6) which connects the high-pressure chamber (3) to the atmosphere and is equipped with an adjustable valve (7). In one aspect, the firing apparatus is characterized in that the high-pressure bores (5a) seen in firing direction are arranged in the front area of the high-pressure chamber (3). In one aspect, the firing apparatus is characterized in that the rear low-pressure bores (5b) seen in firing direction are arranged at the rear end of the low-pressure chamber (4) and the front low-pressure bores (5b) are arranged at the front end of the low-pressure chamber (4). In one aspect, the firing apparatus is characterized in that the low-pressure chamber (4) is a sleeve which is twistable on the firing barrel (5) and the sleeve has an inner shell surface (5c), and identical drill holes are arranged in the inner shell surface (5c) on the rear and front low-pressure bores (5b), and the gas flow is adjustable by twisting the sleeve on the firing barrel (5). In another aspect, the present invention is directed to the use of a firing apparatus according to the present invention in in rocket artillery or rifles.

Detailed Description

According to the invention, this task is achieved through the characteristics of claim 1.

The invention is characterized by a high-pressure chamber which surrounds the rear end of the firing barrel when seen in firing direction, a low-pressure chamber which is arranged in front of the high-pressure chamber when seen in firing direction and which surrounds the firing barrel, high-pressure bores in the firing barrel in the area of the high-pressure chamber, said bores connecting the interior of the firing barrel to the high-pressure chamber, and rear and front low-pressure bores when seen in firing direction in the firing barrel in the area of the low-pressure chamber, said bores connecting the interior of the firing barrel to the low-pressure chamber, with a blow-out channel which connects the high-pressure chamber to the

Claims

1. A firing apparatus for the firing of cartridges, in particular rifle cartridges, comprising an ammunition magazine for receiving the cartridges and a firing barrel in front of the ammunition magazine in firing direction, characterized by a high-pressure chamber which surrounds the rear end of the firing barrel when seen in firing direction, a low-pressure chamber which is arranged in front of the high-pressure chamber when seen in firing direction and which surrounds the firing barrel, high-pressure bores in the firing barrel in the area of the high-pressure chamber, said bores connecting the interior of the firing barrel to the high-pressure chamber, and rear and front low-pressure bores when seen in firing direction in the firing barrel in the area of the low-pressure chamber, said bores connecting the interior of the firing barrel to the low-pressure chamber, with a blow-out channel which connects the high-pressure chamber to the atmosphere and is equipped with an adjustable valve.

2. The firing apparatus according to claim 1, characterized in that the high-pressure bores seen in firing direction are arranged in the front area of the high-pressure chamber.

3. The firing apparatus according to claim 1 or 2, characterized in that the rear low-pressure bores seen in firing direction are arranged at the rear end of the low-pressure chamber and the front low-pressure bores are arranged at the front end of the low-pressure chamber.

4. The firing apparatus according to one of the claims 1 to 3, characterized in that the low-pressure chamber is a sleeve which is twistable on the firing barrel and the sleeve has an inner shell surface, and identical drill holes are arranged in the inner shell surface on the rear and front low-pressure bores, and the gas flow is adjustable by twisting the sleeve on the firing barrel.

5. Use of a firing apparatus according to one of the claims 1 to 4 in in rocket artillery or rifles.