

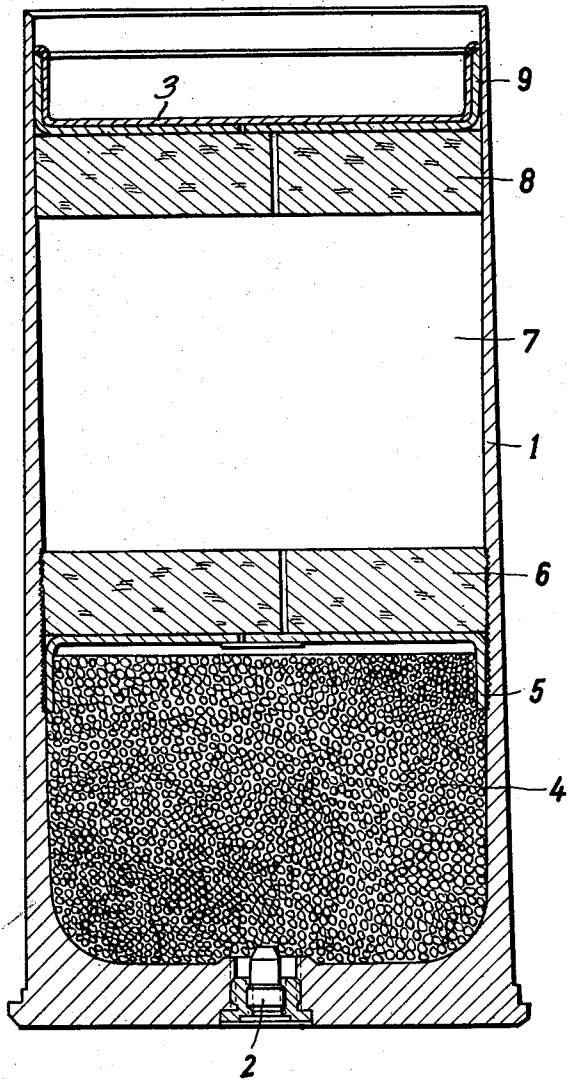
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BLANK CARTRIDGE

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BLANK CARTRIDGE

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The invention relates to a blank cartridge having a propellant charge consisting of pourable gun powder, for example "smokeless" nitrocellulose powder, which is tamped by means of cork discs or the like.

A large number of types of blank cartridges of this kind are known. In these known cartridges, the discs required for tamping purposes, which may consist, for example, of cork, pressed cork, plastic, glued sawdust—pressed cork mixtures and the like, are fixed to the cartridge case as a rule by cementing and similar means, because otherwise the tamping effect is unsatisfactory and, consequently, a report effect similar to a sharp shot is not obtained on discharge. This cementing of the tamping discs, however, is a time-consuming operation which cannot be fitted into the working cycle of commercial conveyor-line production of such practice ammunition or can only be fitted in with difficulty and, on the contrary, constitutes a bottleneck in production.

The problem set by the invention is to obviate these difficulties and to provide a blank cartridge which complies fully with all the requirements of mass production and which, at the same time, also gives a sharp and powerful muzzle sound or blast with a particularly small weight of charge.

According to the invention, this problem is solved in that the means for tamping the propellant charge consists of two or more discs introduced, preferably pressed, into the cartridge case and consisting of cork, pressed and glued cork granules and/or sawdust and the like and said discs are at such a distance from one another that compression chambers are formed between the individual discs.

Within the limits of the invention, these compression chambers may be filled with air, gas, or elastic or porous materials, such as, for example, foam plastic and the like. If required, the gas charge may be under higher pressure than atmospheric pressure.

In a preferred embodiment of the invention, the outer tamping disc is screened on the outside in a manner known per se in other blank cartridges by means of a cardboard cover or cap, which, for example, is cup-shaped, said cardboard cover or cap being sealed off with respect to the cartridge case with varnish, synthetic shellac or the like.

An embodiment of the new blank cartridge is illustrated in longitudinal section in the drawing.

The reference numeral 1 designates the cartridge case, the reference 2 the so-called threaded percussion primer and the reference 4 the propellant charge proper which consists of pourable gun powder, for example "smokeless" nitrocellulose powder. A cup-shaped cardboard cap 5 pressed into the cartridge case rests against the surface of the propellant charge 4.

In the case shown in the drawing, a first tamping disc 6 is located immediately above said cardboard cap 5, said tamping disc consisting, for example, of cork plastic or bonded mouldings of cork granules and sawdust and the like and being clamped to the cartridge case by being pressed into it. A second cork disc 8 is arranged at a distance from the disc 6, so that a hollow space 7 is formed between the two tamping discs, said hollow space being filled, for example, with air. Abutting against the outer tamping disc 8 there is also a cup-shaped cardboard

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cap 9 which is sealed off with respect to the cartridge case, for example by means of synthetic shellac coating 3 which protects the charge structure against the penetration of water and the like.

The arrangement operates as follows on discharge:

The priming is initiated in known manner by the firing pin striking against the percussion cap of the threaded percussion primer 2. The priming flash causes the loose powder 4 to ignite. The gas pressure which now builds up first displaces the cardboard cap 5 and the cork disc 6 substantially after the fashion of a piston, so that the compression chamber 7 is reduced correspondingly in size and the powder chamber, which has now become the combustion chamber, is increased correspondingly in size, but without any direct connection being produced between the combustion chamber and the outside air.

Owing to the provision of the second tamping disc 8, which now becomes operative with a time lag and which in turn is released sooner or later from the cartridge case in dependence upon the size, etc. of the compression chamber 7 and according to the adhesive force obtaining between the disc 8 and the cardboard cap 9 as well as the inertia of these elements, complete ignition of the powder and combustion is ensured. The result of this is good pyrotechnic efficiency of the ammunition—and consequently a sharp muzzle sound or blast—for a comparatively small weight of the charge 4. A further feature of the new cartridge consists in that by virtue of the original combination according to the invention in the following sections:

Tamping disc I—compression chamber—tamping disc II

The increase in pressure occurs in such manner that the tamping elements are split up into very small pieces which are therefore not dangerous to the troops taking part.

What we claim is:

1. A blank cartridge comprising a casing having a primer at one closed end and a propellant powder charge in the closed end thereof, a cup-shaped cap in the casing and adjacent the powder charge, a tamping disc in the casing near the charge of powder and pressed in the casing and provided adjacent the cap, a second tamping disc pressed in the casing spaced from the first-mentioned disc to provide a space in the casing between the discs forming a compression chamber between them, and a cup-shaped cap in the casing adjacent the second-mentioned disc and facing an open end of the casing.

2. A blank cartridge according to claim 1, in which the compression chamber is filled with a gaseous fluid.

3. A blank cartridge according to claim 1, in which the compression chamber is filled with a gaseous fluid forming a cushion of gas which is above atmospheric pressure.

4. A blank cartridge according to claim 1, in which the compression chamber is filled with an elastic material.

5. A blank cartridge according to claim 1, in which the compression chamber is filled with a porous material.

6. A blank cartridge according to claim 1, in which a coating is provided on the outer surface of the second-mentioned cap to seal off the casing.

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