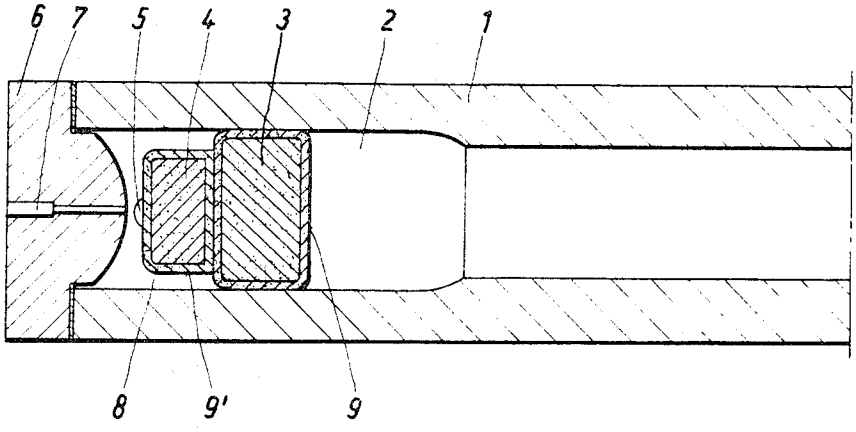
Oct. 4, 1966 W. GÄHLE 3,276,378

CASELESS BLANK CHARGE

Filed Oct. 23, 1964



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United States Patent Office

3,276,378
Patented Oct. 4, 1966

3,276,378

CASELESS BLANK CHARGE

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Filed Oct. 23, 1964, Ser. No. 406,006
Claims priority, application Germany, Oct. 26, 1963, R 36,425
3 Claims. (Cl. 102—97)

Certain forms of guns, in particular those of large calibre, have a comparatively long chamber into which the propellent charge, generally packed in a bag, is inserted after a projectile has first been introduced into the barrel. Because of the special form of the propellent charge, such guns also have a special form of breech and of detonating arrangement which does not permit practice firing by means of known blank propellent charges accommodated in shell cases.

It has always been felt to be a fault that practice or battle training firing is not possible with such guns, since, on the one hand, it is difficult to fix a powder charge suitable for practice firing in the chamber in such a way that satisfactory detonation is ensured and, on the other hand, suitable tamping of the powder charge has been wanting or it has been no less difficult to arrange such a tamping means in the chamber or in the barrel.

The blank charge according to the invention eliminates these defects and is characterized in that a powder charge is combined with a tamping plug adapted to the cross-section of the chamber to form a single structural unit.

As an advantageous development of the invention, the powder charge is of smaller cross-section than the tamping plug. In this way, a suitable combustion chamber is created for the powder charge, so that on the firing thereof a gas pressure is built up which shatters the tamping plug into very small pieces.

The tamping plug referred to above may consist of a filler, for example carcass powder, cork powder, etc., which is mixed into a pasty composition with a synthetic resin cement with the addition of a hardening agent. This composition is poured into moulds matching the cross-section of the chamber and in which it then hardens into tamping plugs.

As a further advantageous development, the tamping plugs and/or also, in manner known per se, the powder charge, are arranged in bag-shaped containers which can be attached to one another, for example, by sewing or cementing. Moreover, it is also possible to arrange the tamping plug and the powder charge in a single bag.

Although the blank charge according to the invention is particularly advantageous for guns using caseless charges, it can, if the breech of the gun and the detonating arrangement are suitably designed, also be employed with advantage in guns in which propellent charges arranged in shell cases are normally used.

The blank charge according to the invention produces a loud explosion similar to a live round, the tamping plug being broken up into very small pieces.

By way of example only, an embodiment of the invention will now be described in greater detail with reference to the accompanying drawing which shows in diagrammatic cross-section only, a gun barrel and inserted blank charge.

A gun barrel **1** has a chamber **2** designed for caseless propellent charges. A blank charge, consisting of a tamping plug or bag **3** and a powder propellent charge or bag **4** attached thereto, is pushed into the chamber to an extent such that the rear end of the powder charge **4**, which end is provided with a primer **5**, is located immediately in front of the breechblock **6**. On the firing of a detonating cartridge **7** introduced into the breechblock, the powder charge is ignited by way of the primer **5** by the usual detonation flash produced when the primer is struck.

As will be seen from the drawing, the powder charge **4** is smaller in cross-section than the tamping plug **3**, so that a combustion chamber **8** is formed. In this way, on ignition of the powder charge, a gas pressure is built up by which the tamping plug is then shattered into very small pieces.

In the blank charge shown in the drawing, the tamping plug **3** and the powder charge **4** are each arranged in a suitable bag **9**, **9'**, respectively, of a kind known per se and these bags are attached to one another by cementing. The covering of the tamping plug with a bag also has the advantage that the insertion of the blank charge into the chamber is facilitated, sealing with respect to the wall of the chamber being also obtained at the same time.

I claim:

1. A caseless blank charge for the chamber of a gun comprising in combination a cylindrical propellent charge incorporating a tamping plug adapted to the cross-section of a chamber of a gun from which the charge is to be fired, the tamping plug having a transverse cross-sectional area greater than that of the propellent charge, a bag containing the propellent charge, and a further bag secured to said first-mentioned bag and comprising the tamping plug.

2. A caseless blank charge for the chamber of a gun comprising in combination a cylindrical propellent charge incorporating a tamping plug adapted to the cross-section of a chamber of a gun from which the charge is to be fired, the tamping plug having a transverse cross-sectional area greater than that of the propellent charge, and a single bag in which both said charge and said plug are housed.

3. A caseless blank charge for the chamber of a gun comprising in combination a cylindrical propellent charge incorporating a tamping plug adapted to the cross-section of a chamber of a gun from which the charge is to be fired, the tamping plug having a transverse cross-sectional area greater than that of the propellent charge, the propellent charge being secured to the rear end of the tamping plug.

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