

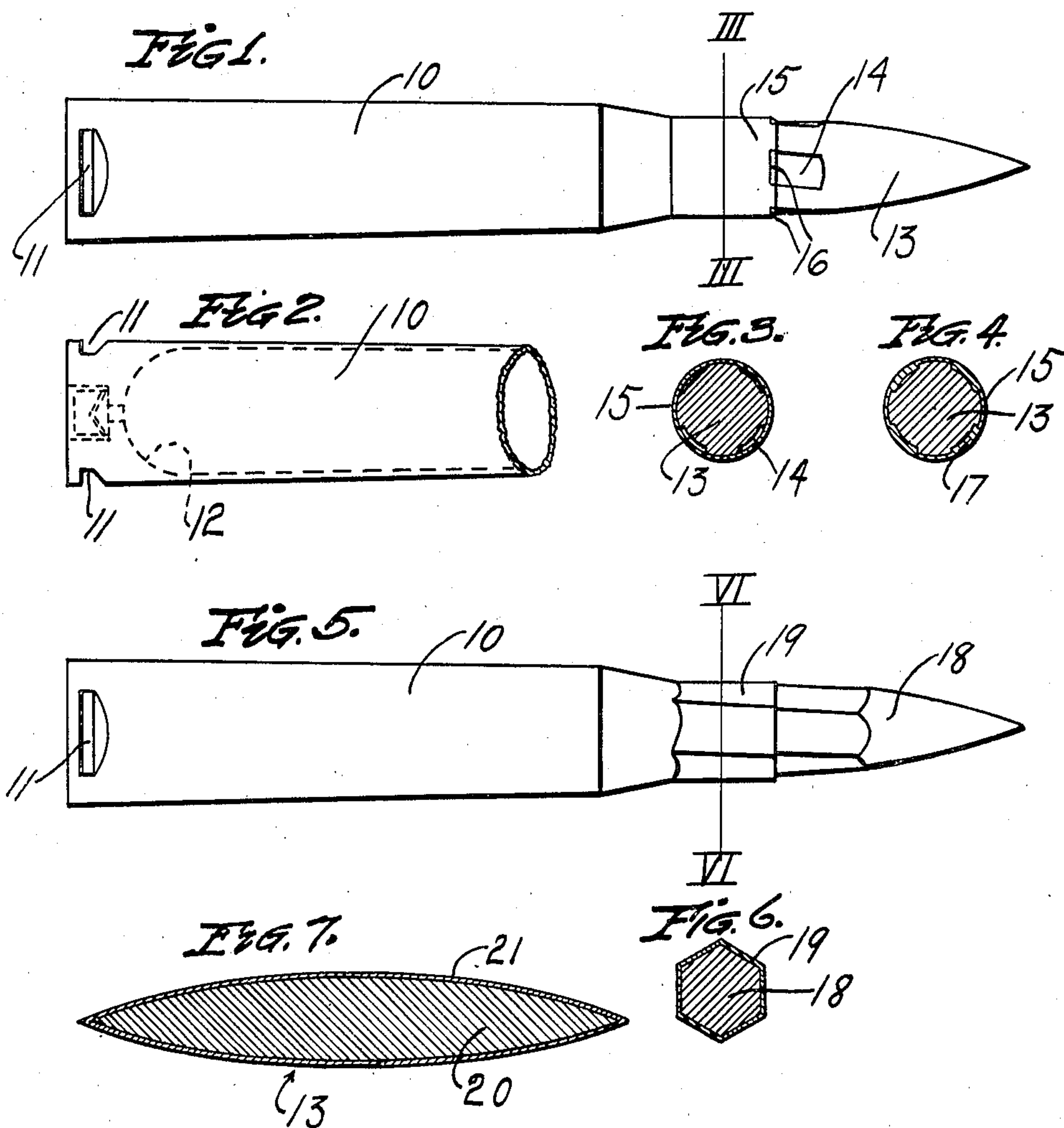
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CARTRIDGE

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CARTRIDGE

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This invention relates to ammunition for rifles, and more particularly for magazine rifles. It has especial relation to ammunition which uses a hardened bullet such as a steel bullet, in which grooves are cut which conform to the rifling of the gun barrel, and it further relates to the combination with such hardened and grooved bullet of a cartridge shell having extractor grooves which when received in the extractor of a gun will locate the shell in predetermined position of axial rotation, and which bullet is so secured to the shell that when the shell is held by the extractor the bullet grooving will be aligned to engage the rifling of the gun barrel as the cartridge is slid into the gun barrel.

The objects of the present invention are:—

(a) To make a hardened bullet such as one of steel having pre-formed grooves which will conform to the rifling of the gun barrel and to provide a cartridge shell therefor, which may be secured to the bullet in predetermined position, and which when so secured may be used in a gun and will properly position the bullet in the gun barrel;

(b) To provide a hardened and grooved bullet therefor;

(c) To provide a hardened and encased bullet for such use; and

(d) To provide a cartridge shell which is adapted to be received in a gun and held in a known and predetermined position so far as rotation about its longitudinal axis is concerned.

The means by which the foregoing and other objects are accomplished and the manner of their accomplishment will readily be understood from the following specification on reference to the accompanying drawings, in which:—

Fig. 1, is a side elevation of a cartridge with the bullet secured therein.

Fig. 2, is a fragmentary plan view showing the rear portion of a cartridge shell.

Fig. 3, is a section taken as on the line III—III of Fig. 1.

Fig. 4, is an identical section showing a modification of the means whereby the car-

tridge shell engages and prevents axial rotation of the bullet.

Fig. 5, is a side elevation of the cartridge with a bullet of modified cross section secured therein.

Fig. 6, is a section taken on line VI—VI of Fig. 5.

Fig. 7, is a longitudinal section through the bullet, showing a plating of softer metal thereon.

Referring now to the drawings in which the various parts are indicated by numerals, 10 is a cartridge shell having the usual thin walls, which shell has parallel tangentially disposed slots 11 adjacent the base end thereof and on opposite sides of the longitudinal axis of the shell and bullet, these grooves taking the place of the usual circumferential groove. Preferably the base of the shell is of heavy section as is indicated by the dotted inner outline 12 shown in Fig. 2. The parallel slots provide notches which may be engaged by an extractor which if properly shaped will prevent rotation of the shell about its longitudinal axis, in relation to said extractor.

13 is a bullet preferably of steel or other hard metal which bullet has rifling grooves 14 which conform in number, size and twist to the rifling of the gun barrel with which the bullet is to be used, the pre-grooving of the bullet being made necessary by reason of the hardness of the bullet which hardness would prevent the rifling of the barrel from cutting grooves as is usual with soft bullets, or in the event it did cut them, would cause rapid destruction of the rifling. The front end 15 of the shell may be crimped, as at 16, into the grooves 14 to prevent axial rotation of the bullet with respect to the shell. In Fig. 3, it will be seen that the rifling grooves 14 extend backward within the front end 15 of the shell and in Fig. 4, projections 17, extending inward from the shell 10, are shown engaging and filling these grooves, these inward projections obviating the necessity of crimping the forward end of the shell in such case.

In Figs. 5 and 6, a modified form of bullet 18 is shown in which the body of the bullet

is shown hexagonal in shape conforming to a similar interior shape of a gun barrel with which it is to be used. In such case the front end 19 of the shell is of similar hexagonal cross section and by its shape relatively positions the shell and bullet as before.

In Fig. 7, a longitudinal section of the bullet is shown, this figure being introduced not for the purpose of illustrating the shape of such section but to show a bullet which has a core 20 of hard material such as steel and an exterior coating of softer material 21 which softer material permits a closer fit of the bullet into the barrel. It will be understood that it is not the purpose or intention to make this outer coating of such thickness as to care for the rifling of the barrel and that as a matter of fact the coating referred to under ordinary circumstances is a paper thin plating of copper or other soft material.

This bullet is intended for use with a gun in which the rifling corresponds with the grooving or shaping of the bullet and which gun has an extractor or other portion with parallel jaws which will engage the slots of the shell, and properly present the bullet to the rifling of the barrel, when the cartridge is inserted into the firing chamber.

Having described my invention, what I claim is:

The combination with a projectile, preformed to conform to the rifling of the gun barrel with which it is to be used, of a cartridge shell having a body portion circular in cross section, said shell having a heavily thickened base, and having oppositely disposed, parallel grooves cut into said base at right angles to the longitudinal axis of the shell, said shell and bullet being secured together in a predetermined position.

In testimony whereof I hereunto affix my signature.

THOMAS E. FLOWERS.