

No. 702,208.

Patented June 10, 1902.

W. E. HAYNER.
CARTRIDGE.

(Application filed Feb. 25, 1902.)

(No Model.)

FIG. 1.

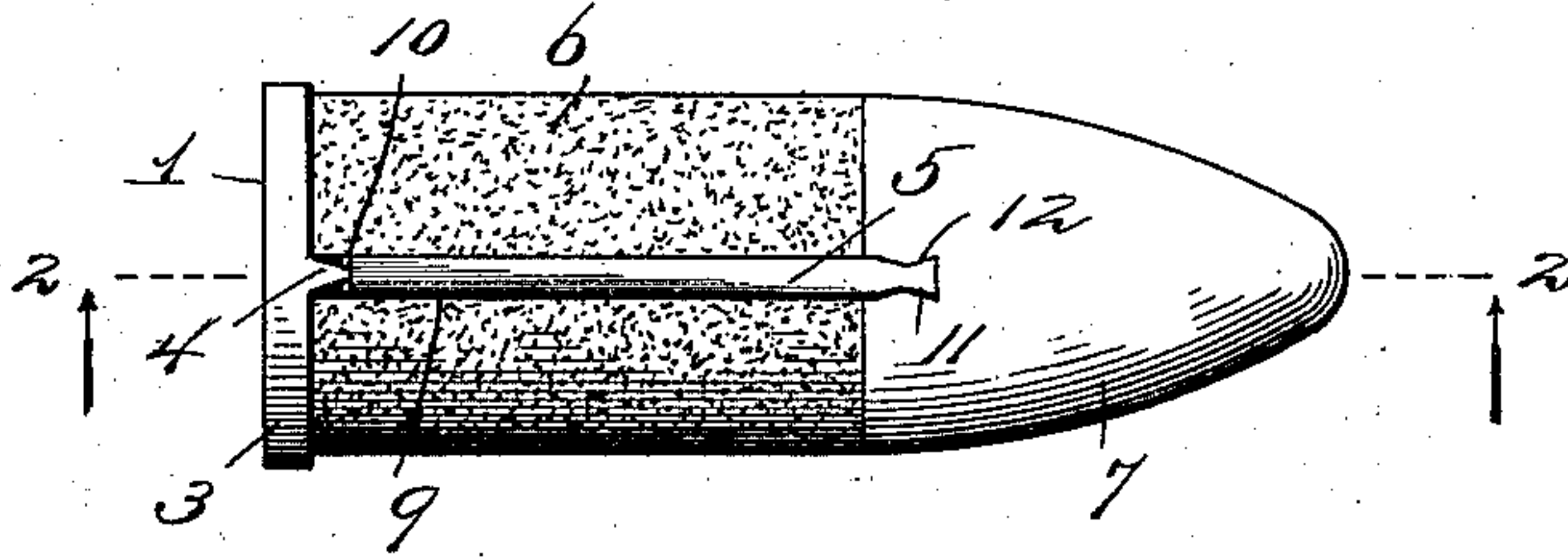


FIG. 2.

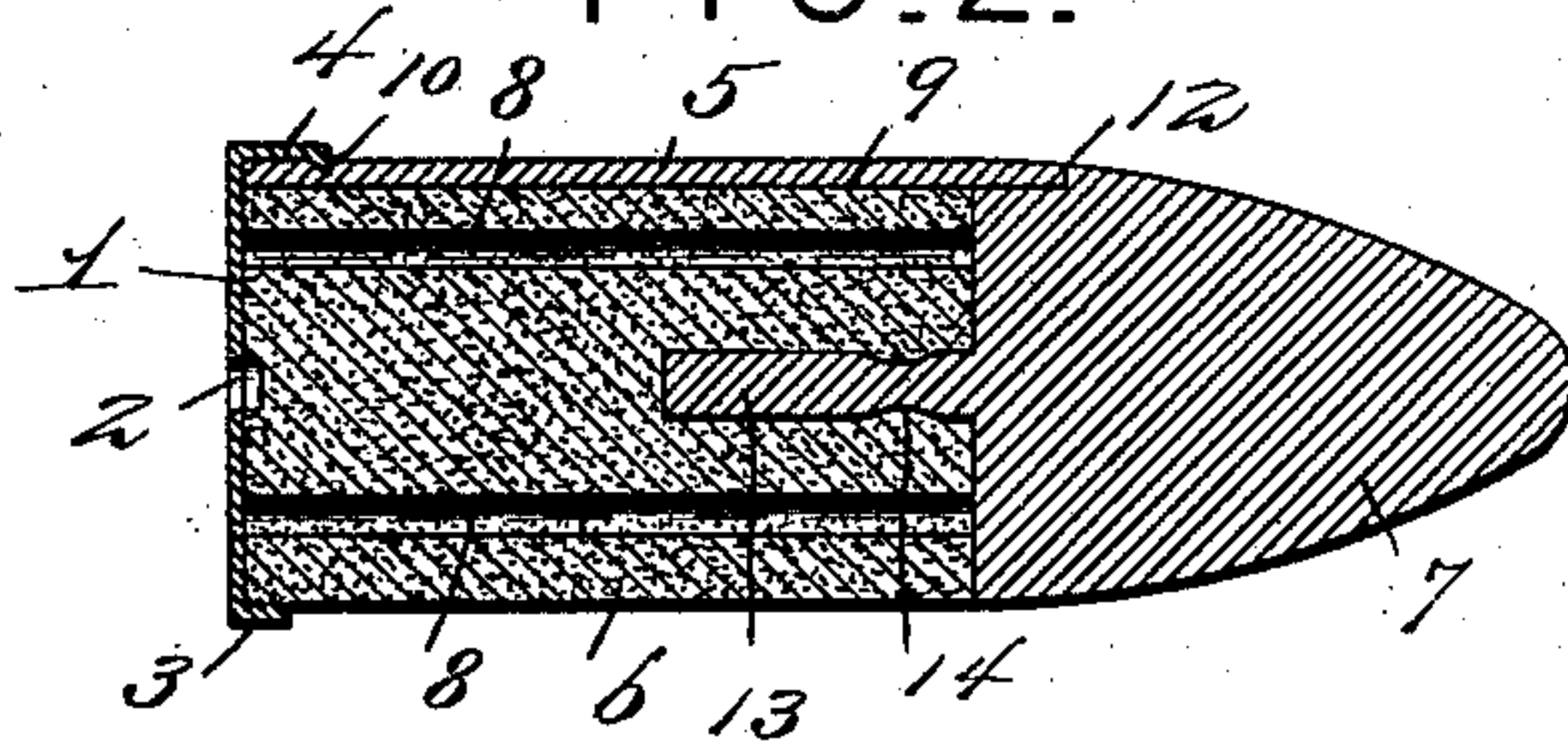


FIG. 3.

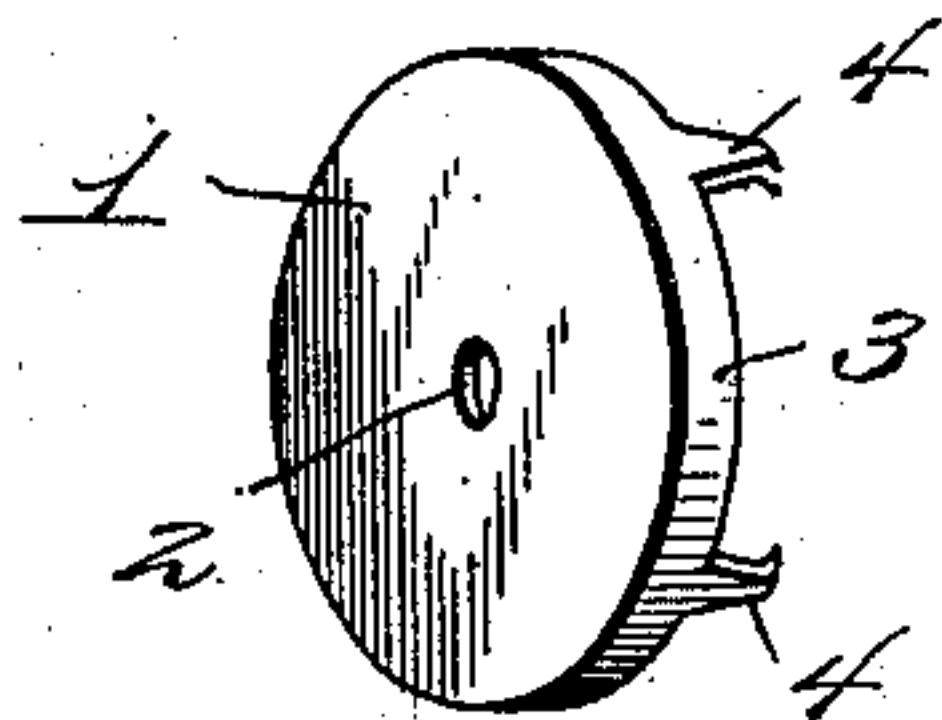


FIG. 4.

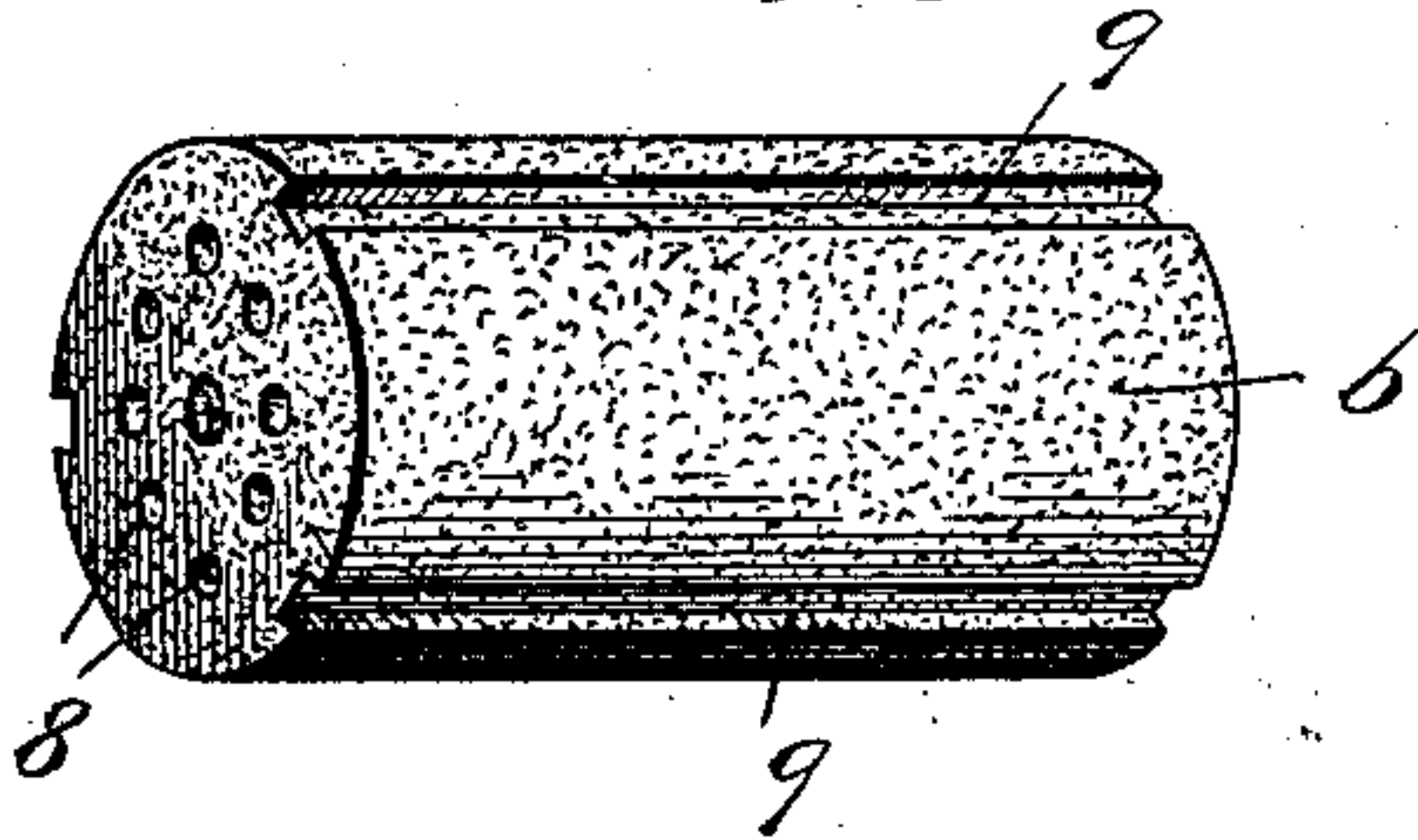


FIG. 5.

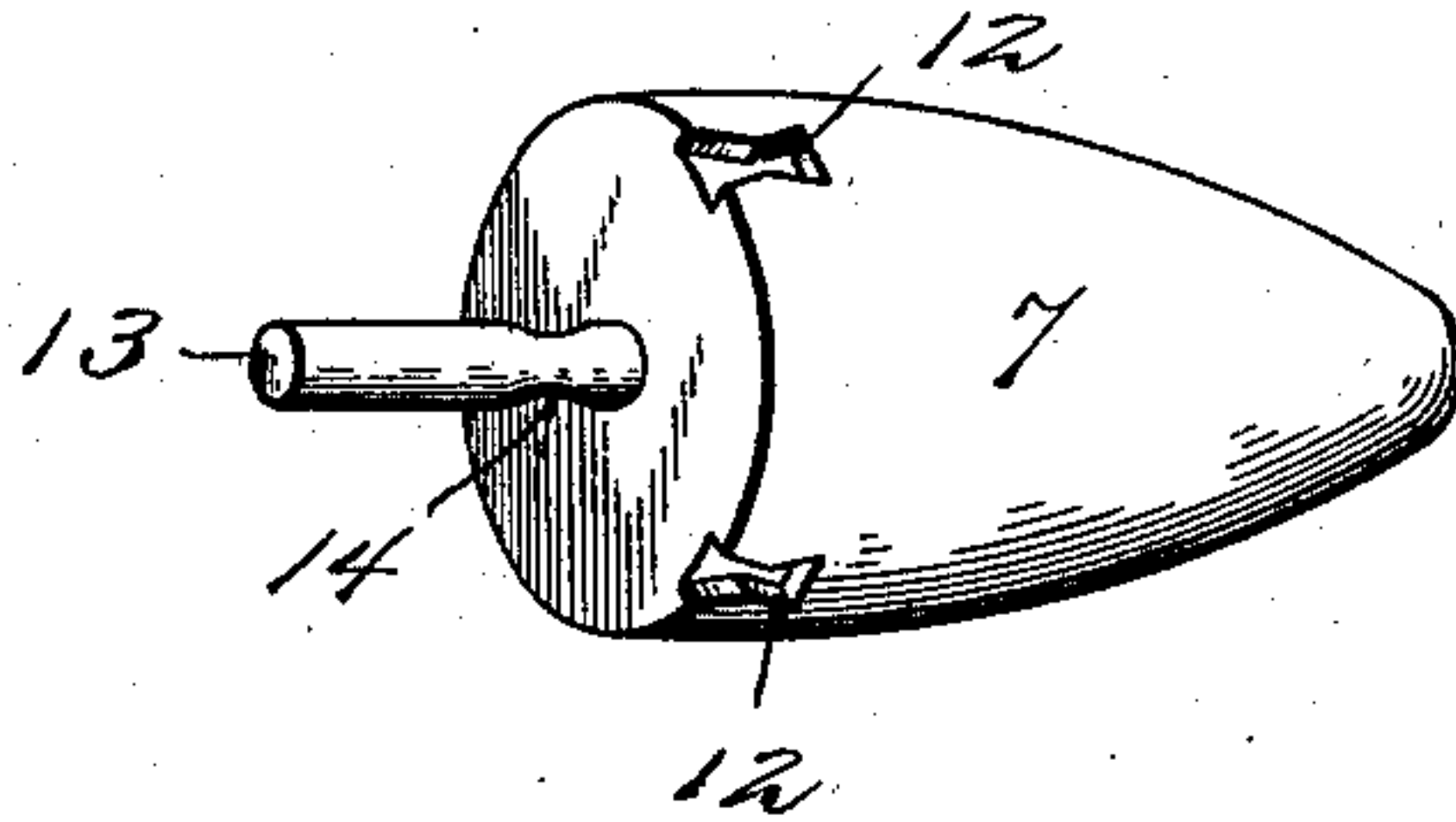
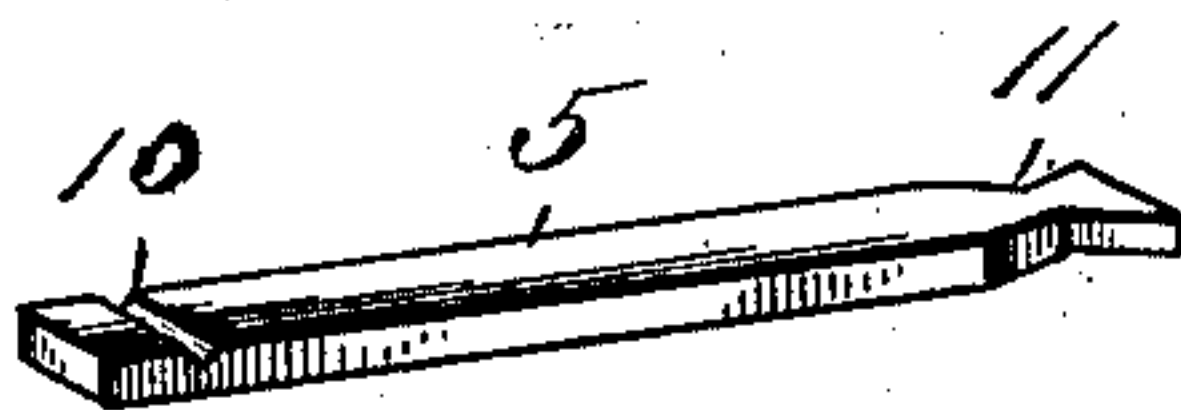


FIG. 6.



Witnesses

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CARTRIDGE.

SPECIFICATION forming part of Letters Patent No. 702,208, dated June 10, 1902.

Application filed February 25, 1902. Serial No. 95,521. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM EVERTON HAYNER, a citizen of the United States, residing at Springboro, in the county of Warren and State of Ohio, have invented new and useful Improvements in Cartridges, of which the following is a specification.

This invention relates to cartridges, having for its object the provision of a device of this character to enable smokeless powder in compressed form to be utilized in the construction of cartridges in a cheap, durable, and proficient manner.

A further object of the invention is to provide a cartridge which will after being fired leave the barrel of the instrument used free of residue, thereby obviating all liability of the instrument being rendered useless by the barrel thereof becoming clogged.

The invention consists in the construction, combination, and arrangement of parts, to be hereinafter fully described, claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a cartridge constructed in accordance with my invention. Fig. 2 is a central section on the line 2 2 of Fig. 1. Fig. 3 is a detail perspective view of the firing-head. Fig. 4 is a detail perspective view of the cylinder of smokeless powder. Fig. 5 is a detail perspective view of the projectile. Fig. 6 is a detail perspective view of one of the stays or coupling-bars.

1 designates a firing-head provided with a central opening 2 for the reception of the fulminate and an annular flange 3, provided with upwardly-projecting prongs 4, having their ends bent to engage the inner ends of a plurality of stays or coupling-bars 5, detachably securing them to the firing-head, and which are embedded in a charge of smokeless powder 6, and rigidly secured to their outer ends is a projectile 7. The charge 6 is in the form of a cylinder of compressed smokeless powder provided with a number of longitudinally-arranged perforations 8 and on the exterior thereof with longitudinally-arranged recesses 9, in which are embedded the stays or coupling-bars 5, providing the exterior of the cartridge with a smooth even surface, obviating any liability of the stays interfering

with proper operation of the cartridge. The stays or coupling-bars 5 are each provided near one of their ends with transversely-arranged recesses 10, in which fit the bent ends of the prongs 4, securing a sufficient hold upon the stays or coupling-bars to hold the component parts of the cartridge together under ordinary circumstances, but not to prevent the stays or coupling-bars from being carried out of the gun-barrel with the projectile when the cartridge is discharged. The outer ends of the stays or coupling-bars are dovetailed, as is illustrated at 11, to fit in corresponding dovetailed recesses 12 on the exterior of and communicating with the under side of the projectile.

The projectile may be provided with the above-mentioned dovetailed recesses to receive the stays or coupling-bars, or they may be embedded in the projectile when the same is being molded.

The projectile is of the usual form and has depending from the under side thereof a stem 13, provided with an annular depression 14, and is adapted to have the charge of powder molded around the same, and through the means of the depression 14 the charge of powder and the projectile are secured together against casual disconnection.

It is readily perceived from the above description, taken in connection with the accompanying drawings, that I provide a cartridge which will when discharged leave the gun-barrel free from residue, as the projectile will in leaving the gun-barrel withdraw the stays or coupling-bars with it, thereby leaving nothing within the gun-barrel to clog or injure the same, and, further, that the cartridge is composed of but few parts, which are simple in construction and durable, enabling the cartridge to be constructed in a cheap, durable, and proficient manner.

Having thus fully described the invention, what is claimed as new is—

1. In a cartridge, the combination with a firing-head, of a cylinder of powder, a projectile, and stays or coupling-bars rigidly connected to the projectile and detachably secured to the firing-head.

2. A cartridge comprising a firing-head having prongs, a charge of powder, a projectile,

and stays or coupling-bars rigidly secured to the projectile and detachably secured to the firing-head through the medium of the prongs.

3. A cartridge comprising a firing-head having 5 ing prongs, a charge of powder, a projectile having dovetailed recesses, and stays or coupling-bars having their outer ends dovetailed and their inner ends recessed.

4. A cartridge comprising a firing-head having 10 ing prongs, a cylinder of powder having longitudinal recesses, a projectile, a stem upon

said projectile having a reduced portion, and stays or coupling-bars having their outer ends dovetailed and provided near their inner ends with recesses.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM EVERTON HAYNER.

Witnesses:

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