

No. 780,003.

PATENTED JAN. 10, 1905.

T. S. KING.
CARTRIDGE.

APPLICATION FILED FEB. 9, 1904.

Fig. 1.

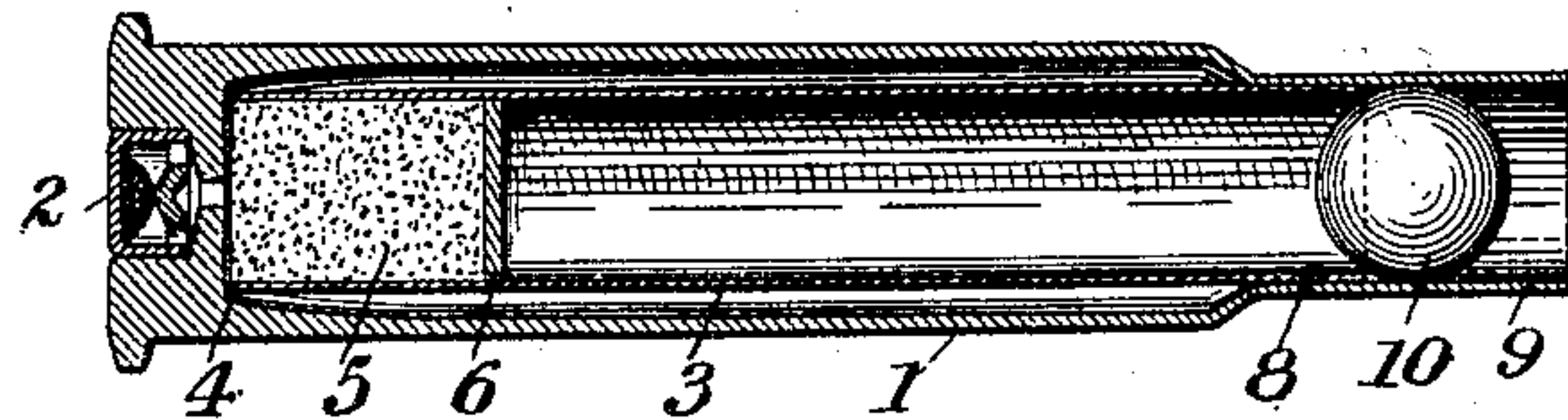


Fig. 2.

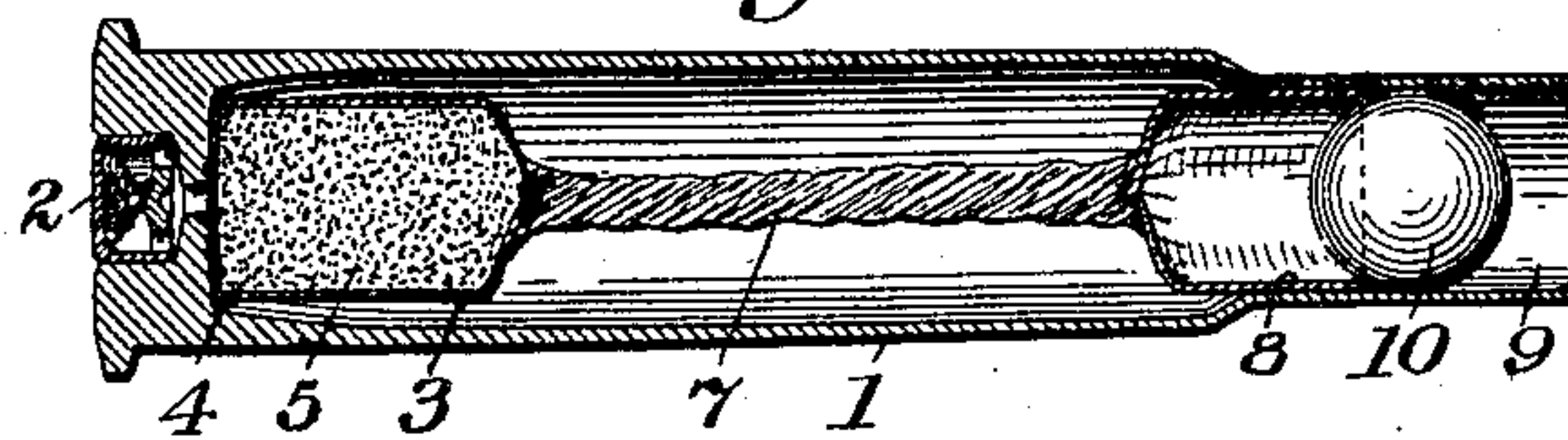


Fig. 3.

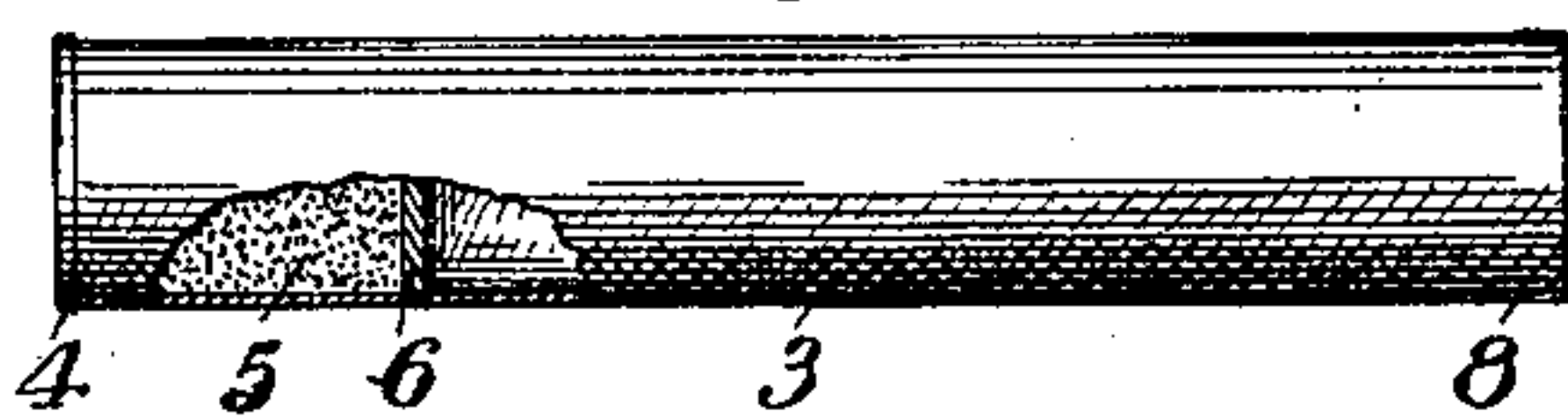


Fig. 4.

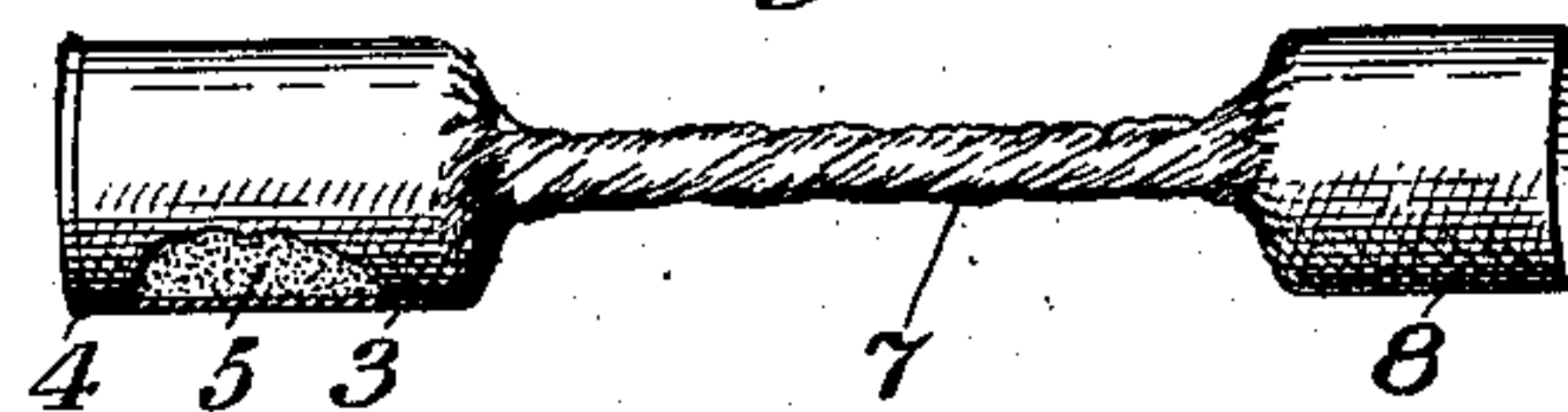
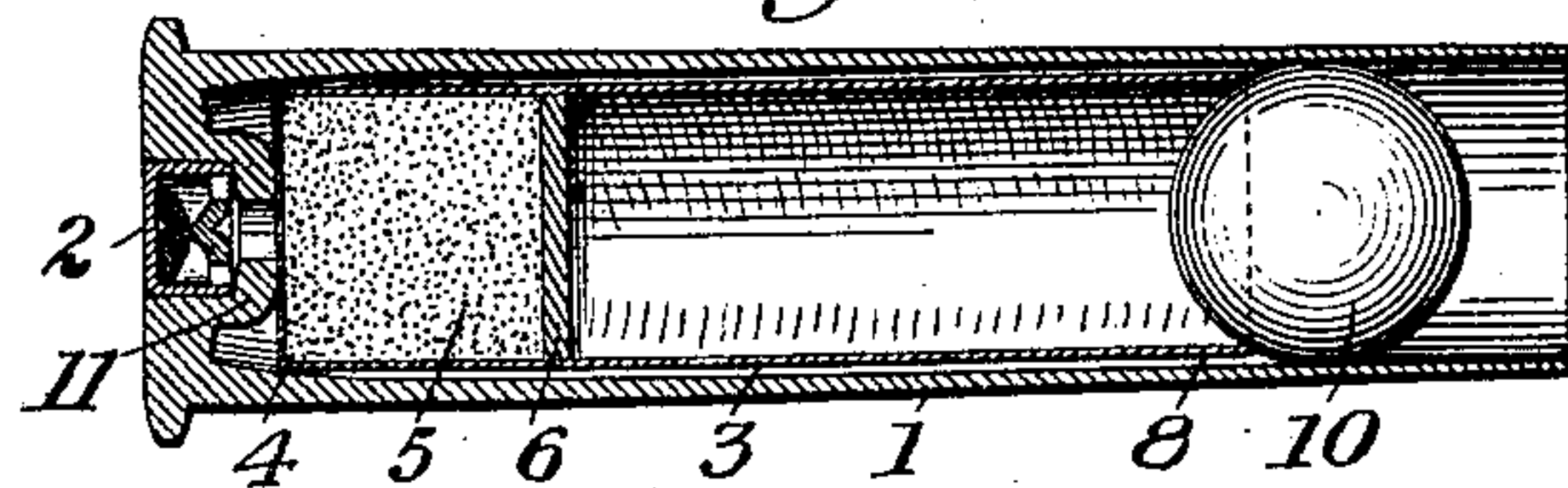


Fig. 5.



Witnesses:

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UNITED STATES PATENT OFFICE.

THOMAS S. KING, OF WASHINGTON, DISTRICT OF COLUMBIA.

CARTRIDGE.

SPECIFICATION forming part of Letters Patent No. 780,003, dated January 10, 1905.

Application filed February 9, 1904. Serial No. 192,841.

To all whom it may concern:

Be it known that I, THOMAS S. KING, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Cartridges, of which the following is a specification.

This cartridge is especially intended for gallery use in rifles or pistols with reduced charges of smokeless powder. The short-range practice-cartridges now in general use for United States service and other high-power rifles are very unsatisfactory. The practice charge of smokeless powder, usually about two and one-half grains, distributes itself in a thin layer over the bottom of the cartridge-shell below the path of the blast from the primer, so that the bullet is often forced into the barrel by the explosion of the fulminate in the primer before the powder is ignited. The bullet is then expelled from the barrel before the powder is fully burned with a low velocity, which causes it to fall below the point aimed at. In some cases the powder fails to ignite and the bullet is merely driven into and sticks in the barrel. Another objection to the usual practice-cartridges, especially those with a bottle-neck shell, is the fact that the neck of the shell must be provided with an annular indentation or series of indentations to prevent the bullet being forced into the powder-chamber of the shell. Special tools are therefore requisite to enable the shooter to reload the empty shells of his high-power cartridges for gallery use.

The new cartridge, which entirely overcomes the specified difficulties, comprises the usual brass shell with central primer, a combustible powder-container and bullet-stop, usually a tube of thin stiff nitrated paper, in which the powder is held as a compact mass directly in front of the primer, and a bullet, either round or conical, supported in the mouth of the shell and seated upon the end of the powder-container.

Referring to the accompanying drawings, Figure 1 is a vertical axial section of a United States service thirty-caliber gallery-cartridge with a tubular powder-container having a wad over the powder. Fig. 2 is a vertical axial

section of the same cartridge with a modified powder-container. Figs. 3 and 4 are side elevations of the powder-containers used in the cartridges of Figs. 1 and 2, respectively; and Fig. 5 is a vertical axial section of a forty-five caliber Springfield gallery-cartridge, using the powder-container shown in Fig. 3.

The cartridge shown in Figs. 1 and 2 comprises the usual bottle-neck brass shell 1 with a central primer 2. Within the shell and resting upon its base is the powder-container 3, which is preferably a tube of thin stiff highly-combustible material, such as nitrated paper, closed at the bottom by a thin piece of nitrated paper 4. The charge of smokeless or other powder 5 is preferably held in the base of the tube directly in front of the primer in position to be fully ignited by the blast from the fulminate. In the cartridge of Fig. 1 the powder is confined by a thin wad 6, pushed into the paper tube. In the cartridge of Fig. 2 the powder is held in place by twisting the intermediate portion 7 of the tube. The tubular powder-container is preferably of such diameter that its front end 8 fits closely within and is supported by the neck 9 of the shell. The bullet 10 (here shown as spherical) is supported in the neck 9 and rests against the end 8 of the powder-tube, which thus serves as a stop to prevent the bullet being forced into the powder-chamber.

The shell 1 of the forty-five-caliber cartridge (shown in Fig. 5) has an inwardly-projecting primer-seat 11. The powder-container 3 shown in this cartridge is precisely similar to that shown in Fig. 1. It will be seen that the powder 5 is supported in a body which is entirely in front of the primer-seat, so that it receives the direct blast from the fulminate. If the same charge of powder were thrown loosely into the shell, a considerable portion of it would usually lie around or beneath the primer-seat in such a position that it would not be ignited by the primer.

The combined powder-container and bullet-stop, which is the novel feature of this cartridge, can be cheaply manufactured and distributed, with or without a powder charge therein. It is not only an essential element of a perfect practice-cartridge, but enables the

shells to be easily reloaded without any tools except those for removing and seating the primer. The neck of the shell does not need to be indented or cannellured to prevent the ball from passing into the powder-chamber. The same shell can therefore be used both for full and partial charges. In reloading the tube containing the powder charge is merely dropped into the shell and the bullet is then pushed into the mouth until it rests upon the end of the tube. The powder charge can be accurately measured and placed in the tubes at the factory by automatic machinery, and a measuring-tool thus becomes unnecessary for the user, who is, moreover, provided with charges of powder which are of uniform weight and give accurate results.

It is obvious that the device shown and described may be variously modified, since its functions as a powder-container and bullet-stop are entirely distinct and independent. The powder need not be confined in a body at the base of the container, since it will lie substantially in the path of the blast from the primer even if unconfined. The closure 4 at the base of the tube may be omitted, the charge of powder being held in the tube by the base of the shell.

The invention is considered to be of sufficient breadth to include any separate powder-container which is constructed to hold a partial charge of powder within the shell and in front of the primer-seat and any bullet-stop which is distinct from or does not constitute an integral part of the shell.

While the invention has been described in connection with cartridges for small-arms, it is evidently applicable to the larger cartridges used in ordnance.

I claim—

1. A cartridge, comprising a shell, a central primer, a bullet, and a separable powder-container supporting a charge of powder in front of said primer, as set forth.
2. A cartridge, comprising a shell, a central primer, a bullet, and a separable combustible powder-container supporting a charge of powder in front of said primer, as set forth.
3. A cartridge, comprising a shell, a central primer, a bullet, and a separable, tubular powder-container supporting a charge of powder in front of said primer, as set forth.
4. A cartridge, comprising a shell, a central primer, a bullet, and a separable combustible, tubular powder-container supporting a charge of powder in front of said primer, as set forth.
5. A cartridge, comprising a shell, a central primer, a bullet, a separable tubular powder-container of thin, stiff, combustible material, and a charge of powder confined in the rear end of said container in front of said primer, as set forth.
6. A cartridge, comprising a shell, a central primer, a separable tubular powder-container of nitrated paper, and a charge of powder con-

fined in the rear end of said container in front of said primer, as set forth.

7. A cartridge, comprising a bottle-neck shell, a central primer, a bullet, a separable tubular powder-container the front end of which fits closely within the neck of said shell, and a charge of powder in said container in front of said primer, as set forth.

8. A cartridge, comprising a bottle-neck shell, a central primer, a bullet, a separable combustible, tubular powder-container the front end of which fits closely within the neck of said shell, and a charge of powder in said container in front of said primer, as set forth.

9. A cartridge, comprising a bottle-neck shell, a central primer, a separable tubular powder-container of nitrated paper the front end of which fits closely within the neck of said shell, and a charge of powder in said container in front of said primer, as set forth.

10. A powder-container for cartridges, consisting of a separable tube of thin, stiff, combustible material, and means for confining a charge of powder in one end of said tube, as set forth.

11. A powder-container for cartridges having a bottle-neck shell, comprising a separable tube of thin, stiff, combustible material the front end of which is adapted to fit closely within the neck of the shell, and means for confining a charge of powder in one end of said tube, as set forth.

12. A cartridge-shell, and a separate, tubular, combustible bullet-stop supported in said shell, as set forth.

13. A bottle-neck cartridge-shell, and a separate, tubular bullet-stop supported in the neck of said shell, as set forth.

14. A cartridge-shell, and a separate, tubular, combustible bullet-stop supported in said shell and bearing against the base of said shell, as set forth.

15. A bottle-neck cartridge-shell, and a separate, tubular bullet-stop supported in the neck of said shell and bearing against the base of said shell, as set forth.

16. A cartridge-shell, and a separate, tubular bullet-stop of thin, stiff, combustible material supported in said shell and bearing against the base of said shell, as set forth.

17. A bottle-neck cartridge-shell, and a separate, tubular bullet-stop of thin, stiff, combustible material supported in the neck of said shell and bearing against the base of said shell, as set forth.

18. A cartridge, comprising a shell having a primer, a powder charge, a bullet, and a separate, combustible bullet-stop supported in said shell, as set forth.

19. A cartridge, comprising a bottle-neck shell having a primer, a powder charge, a bullet, and a separate bullet-stop supported in the neck of said shell, as set forth.

20. A cartridge, comprising a shell, a central primer, a powder-container consisting of

a tube of thin, stiff, combustible material, a charge of powder confined in said tube in front of said primer, and a bullet seated in the mouth of said shell and upon the end of said tube, as set forth.

21. A cartridge, comprising a bottle-neck shell, a central primer, a powder-container consisting of a tube of thin, stiff, combustible material, the front end of which fits closely within the neck of said shell, a charge of powder con-

fined in said tube in front of said primer, and a bullet seated in the mouth of said shell and upon the end of said tube, as set forth.

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

THOMAS S. KING.

Witnesses:

EUGENE A. BYRNES,
GEORGE TATE.