No. 751,519. PATENTED FEB. 9, 1904.

J. H. KILZER.

CARTRIDGE.

APPLICATION FILED AUG. 5, 1903.

NO MODEL.

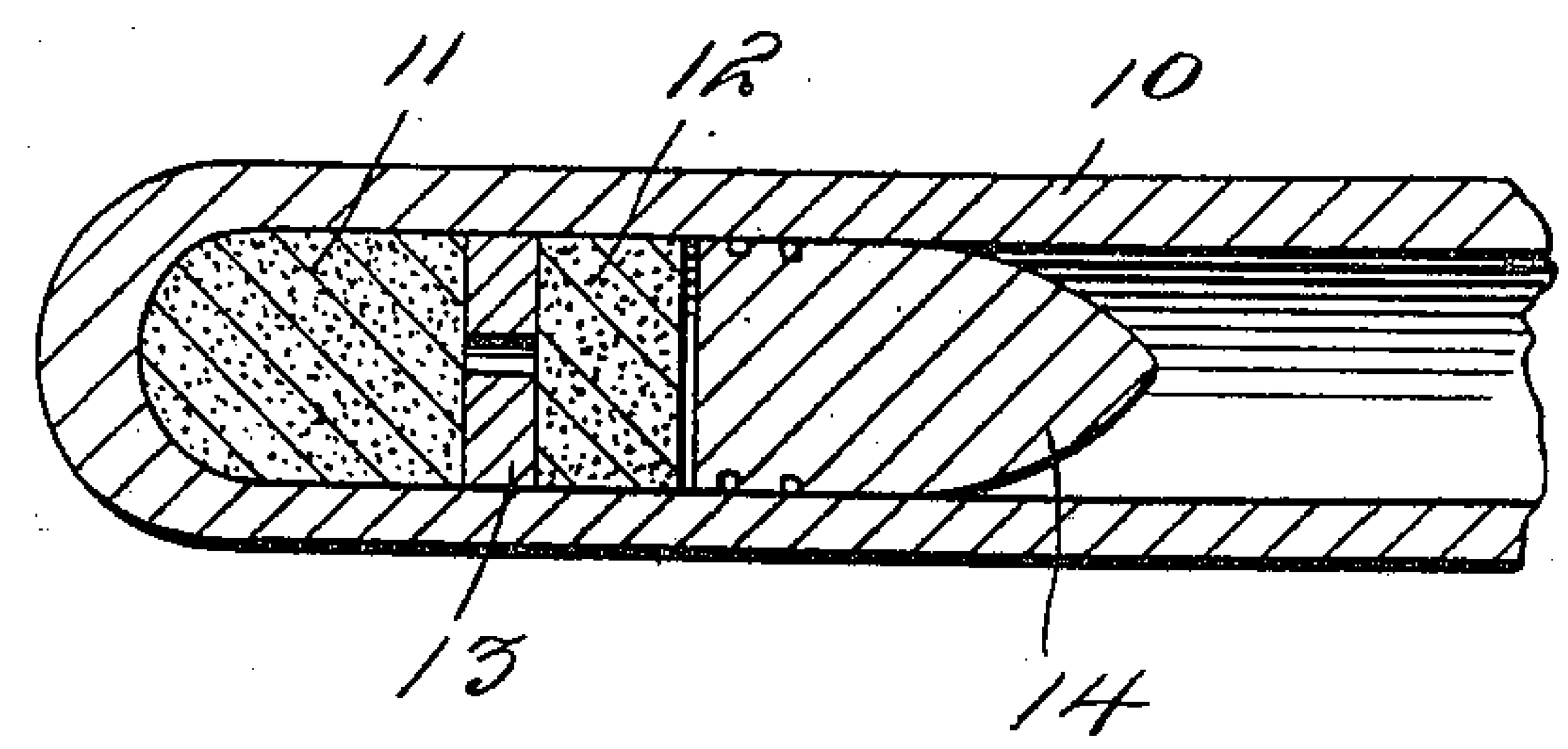

Fig. 1.

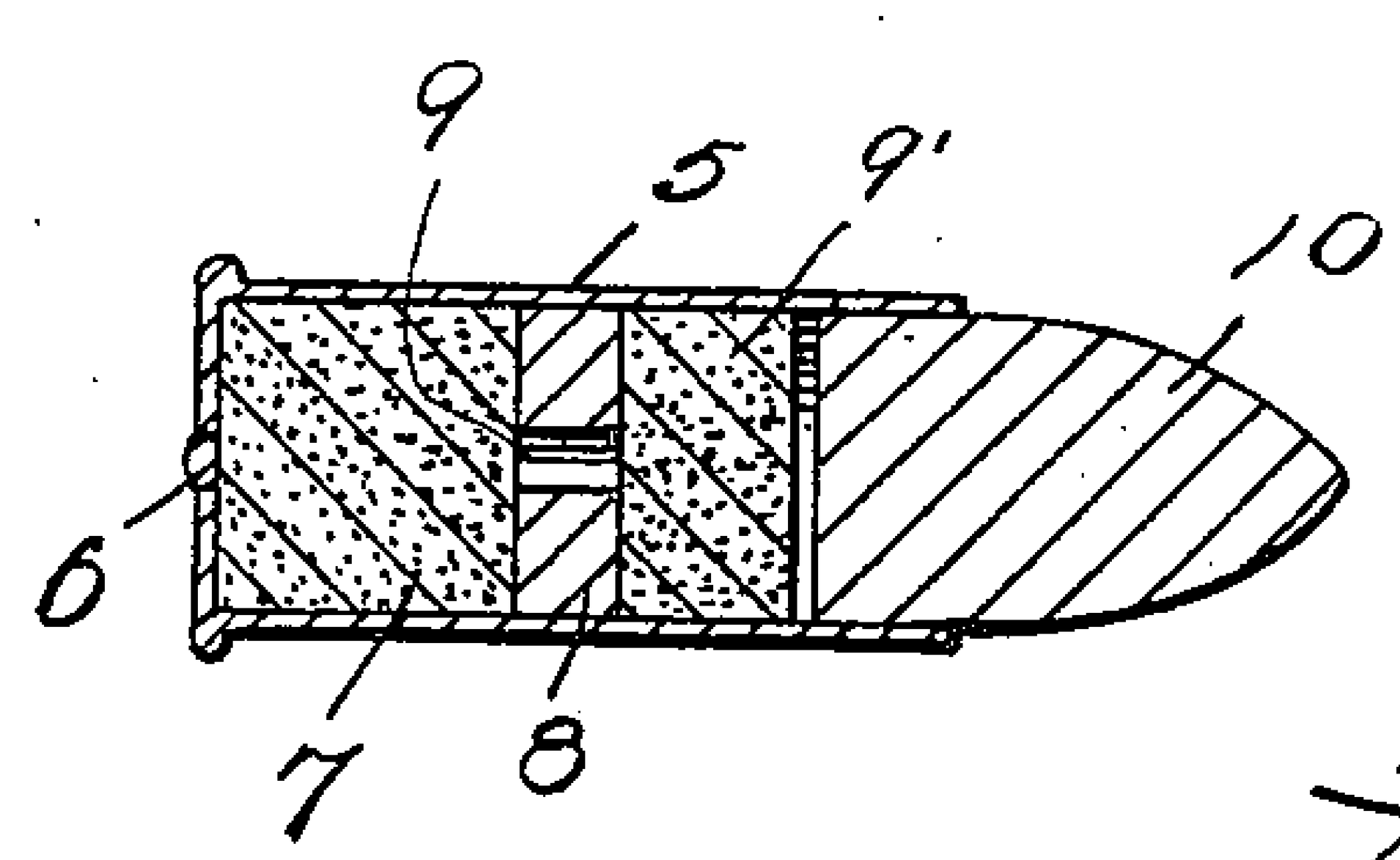

Fig. 2.

Witnesses
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No. 751,519. Patented February 9, 1904.

UNITED STATES PATENT OFFICE.

JOHN HENRY KILZER, OF SEWARD, NEBRASKA.

CARTRIDGE.

SPECIFICATION forming part of Letters Patent No. 751,519, dated February 9, 1904.

Application filed August 5, 1903. Serial No. 168,338. (No model.)

To all whom it may concern:

Be it known that I, JOHN HENRY KILZER, a citizen of the United States, residing at Seward, in the county of Seward, State of Nebraska, have invented certain new and useful Improvements in Cartridges; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to cartridges and wads therefor; and it has for its object to provide means which may be utilized for increasing the velocity of a projectile with a minimum of increased strain on the gun.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in both views, Figure 1 is a section taken longitudinally through the barrel of a gun, showing a load embodying the present invention. Fig. 2 is a longitudinal section of a cartridge embodying the present invention.

Referring now to the drawings, and more particularly to Fig. 2 thereof, there is shown a cartridge including a shell 5 of ordinary form and having a cap 6 in its rear end. In the shell is first placed a quantity of powder 7, on top of which is a diaphragm 8, having a central perforation 9, this diaphragm being of extremely light material, such as very thin metal, or paper, or felt. Upon the diaphragm 8 is placed an additional quantity of powder 9′, and upon this powder is disposed a projectile 10, which is secured in the end of the shell in the usual manner.

When the cap is exploded, the diaphragm, the powder 9, and the projectile 10 are started from the shell, and subsequent thereto the powder 10 is ignited through the perforation in the diaphragm and adds the force of its expansion to increase the velocity of the projectile. When very thin metal, such as tin-foil, is used, the second explosion follows quickly after the first explosion and the heat from the first explosion destroys the tin-foil, so that the entire surface of the second charge of powder is exposed and its combustion is most rapid.

In Fig. 1 of the drawings there is shown a gun-barrel loaded directly with two charges of powder and an intervening diaphragm and with a projectile, the gun-barrel being shown at 10, the charges of powder at 11 and 12, the diaphragm at 13, and the projectile at 14. The action in this case is the same as in that above described.

What is claimed is—

A cartridge comprising a shell having a cap at its rear end, a charge of powder in the end of the shell adjacent to the cap, a thin fusible metallic diaphragm disposed transversely within the shell against said charge of powder, said diaphragm having a central perforation, a second charge of powder in the shell against the diaphragm and a projectile in the shell against the second charge of powder.

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

JOHN HENRY KILZER.

Witnesses:
J. C. LEWELLEN,
L. S. CALLAGHAN.