

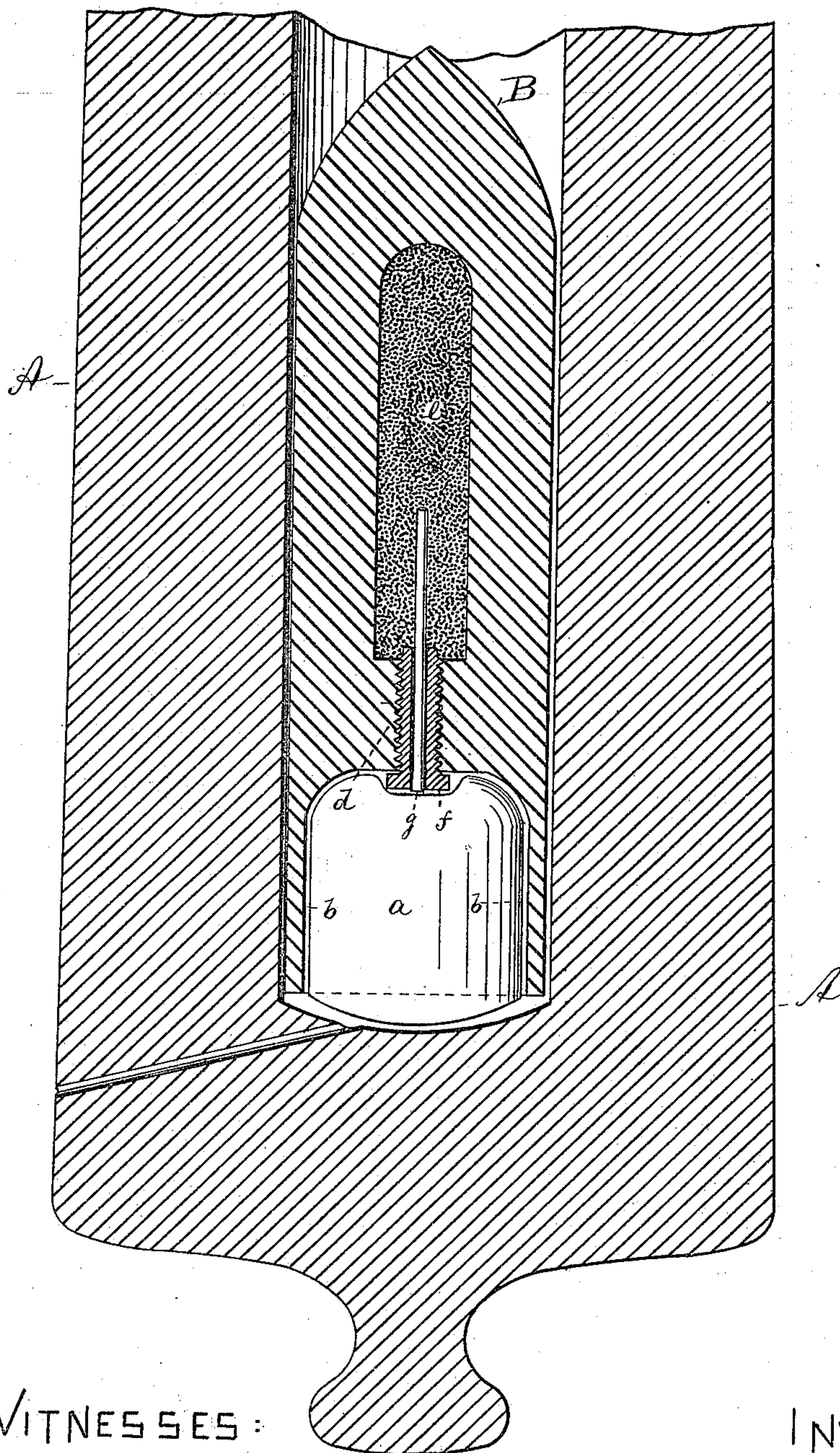
(No Model.)

J. S. PESSENGER.

SHELL.

No 313,683.

Patented Mar. 10, 1885.



WITNESSES:

Wm. A. Lowe
Robt H. Roy

INVENTOR:

John S. Passenger
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att'y

UNITED STATES PATENT OFFICE.

JOHN S. PESSENGER, OF BROOKLYN, ASSIGNOR OF ONE-FOURTH TO WILLIAM
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SHELL.

SPECIFICATION forming part of Letters Patent No. 313,683, dated March 10, 1885.

Application filed October 20, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. PESSENGER, of the city of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Projectile, of which the following specification is a full, clear, and exact description.

This invention relates to projectiles for cannon and fire-arms; and it consists in a projectile having a solid outer shell, with an interior chamber for the bursting-charge, an open-ended chamber at its base for the propelling-charge, and a fuse connecting the two chambers, as more particularly pointed out hereinafter.

In the accompanying drawing, the figure is a longitudinal central section of a shell constructed according to my invention.

With particular reference to the drawing, A represents a cannon, and B a shell. The shell B is hollowed out at its base, so as to form a chamber, *a*, having the walls *b*. This chamber is adapted to contain the propelling-charge, and is entirely or partially open at its end. With the chamber *a* communicates, by a contracted neck, *d*, a chamber, *e*, containing the bursting-charge. This chamber is entirely closed at its front and sides, as shown.

f is a hollow plug fitting into neck *d*. The plug may be provided with screw-threads to engage corresponding screw-threads of the neck, as shown; or it may be locked to the neck by tongue and groove or in other manner. Through the bore of the plug *f* the fuse *g* is introduced, and extends into the front of chamber *a* and into the back of chamber *e*.

To charge the shell the plug *f* is first removed, the chamber *e* is filled, and the plug, with the fuse projecting through it, is fastened into neck *d*. Finally, the propelling-charge contained in a powder-bag is placed into chamber *a*, and may, if desired, be tied in place by a cord attached to the end of plug *f*.

The operation of the shell is as follows: As the propelling-charge in chamber *a* is ignited, the shell is thrown from the cannon, and the fuse, being ignited by the propelling-charge, will gradually, during the flight, burn

within the plug. As soon as the spark from the fuse comes in contact with the bursting-charge in chamber *e*, this charge is ignited and will explode the shell.

It will be seen that the explosion of this shell is not dependent upon the striking of a percussion-fuse against the ground or other resistance, as is the case with the shells ordinarily used. By making plug *f* longer or shorter, or by introducing the fuse to a greater or less extent into the bursting-chamber, the time between the firing and bursting of the shell may be regulated. When the bullet is fired from a fire-arm, no shell is left behind it, as with a cartridge.

I am aware that a projectile has been made having a chamber for the explosive material within its body and a fuse leading therefrom to an air-chamber in its base.

I am aware of Patent No. 49,326, L. Wells, July 28, 1865, in which is shown and described a shell having an interior bursting-charge chamber and a recess or air-chamber at the rear of the shell, the two chambers being connected by a metal fuse-tube. My invention differs from this in that I form a propelling-charge chamber in the base of my projectile and provide means for securing the charge in position.

I claim as my invention—

1. A projectile consisting of a solid outer shell or body having an interior chamber for the bursting-charge, an open-ended chamber at its base for the propelling-charge, and a fuse connecting the two chambers and extending to the head of the propelling-charge chamber, substantially as described.

2. A projectile consisting of a solid outer shell or body having an interior chamber for the bursting-charge, an open-ended chamber at its base for the propelling-charge, a contracted neck connecting the two chambers, and a hollow plug fitting said neck, carrying a fuse, and having a head to which the propelling-charge may be secured, substantially as described.

JOHN S. PESSENGER.

Witnesses:

F. V. BRIESEN,
ROB. H. ROY.