

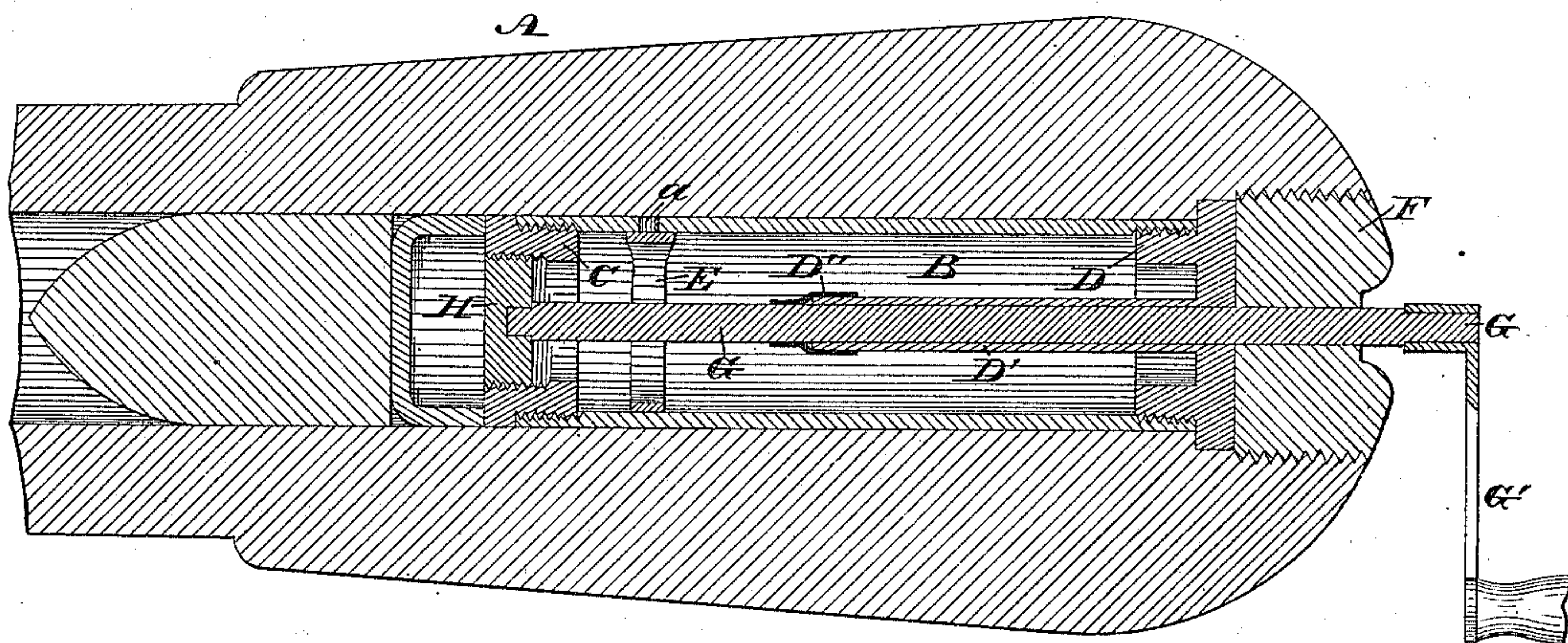
(No Model.)

W. T. CHAMBERLAIN.

PNEUMATIC CARTRIDGE.

No. 312,706.

Patented Feb. 24, 1885.



WITNESSES:

So. P. Grant
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INVENTOR:

Wm. J. Chamberlain
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UNITED STATES PATENT OFFICE.

WILLIAM T. CHAMBERLAIN, OF NORWICH, CONNECTICUT, ASSIGNOR OF
TWO-THIRDS TO BENJAMIN M. PRINCE, OF SAME PLACE, AND
WILLIAM CROSSLEY, OF RANDOLPH, MASSACHUSETTS.

PNEUMATIC CARTRIDGE.

SPECIFICATION forming part of Letters Patent No. 312,706, dated February 24, 1885.

Application filed June 13, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM T. CHAMBERLAIN, a citizen of the United States, residing at Norwich, in the county of New London, State of Connecticut, have invented a new and useful Improvement in Cartridge-Shells, which improvement is fully set forth in the following specification and accompanying drawing, in which the figure is a longitudinal section of a shell embodying my invention, a fire-arm and projectile being also shown therewith in section.

My invention consists of a cartridge-shell adapted to receive a charge of compressed air which, when liberated, impels a ball or cartridge, as will be hereinafter fully set forth.

Referring to the drawing, A represents the barrel of a cannon or gun, which latter will hereinafter be denominated a "fire-arm."

B represents a metallic cartridge-shell, which has at opposite ends the tubular head C and tubular base D, respectively.

In the wall of the shell B is an air-inlet, *a*, which is covered by an inwardly-opening valve, E, properly secured within the shell.

Passing through the breech-block F of the fire-arm and the base D into the shell is a plunger or rod, G, whose forward end is connected, preferably loosely, with a screw-plug, H, the latter engaging with the head C and serving to close the front of the shell B, it being noticed that the base D closes the opposite end thereof. The shell is charged with air, the same entering the inlet *a*, the valve E closing when the proper charge is obtained. The shell is then inserted into the barrel of the gun through the breech, and the breech-block F properly secured. The projectile is also inserted in the barrel, a tubular or hollow wad being introduced between the projectile and front end of the cartridge. The rear end of the rod G projects outside of the breech-block, where it is provided with a handle, G', in order to rotate the rod, and when the same is rotated the plug H is also rotated and unscrewed from the head C, so as to move toward the muzzle of the fire-arm, the effect of which is to uncover the head

C and allow the air to escape from the shell B, so that its action is exerted on the ball or projectile, forcibly impelling the same from the fire-arm, the result being accomplished without the smell, smoke, heat, and fouling tendency of the powder, and the danger of transporting and handling the same, it being seen that the shell remains in the fire-arm. The shell is removed from the fire-arm, reclosed, recharged with air, and again applied in position for further operation.

In order to prevent leakage of air between the rod G and base D, there is connected with the base, on the inner face thereof, a tube, D', which incloses a portion of said rod G and guides the same. To the front end of the tube is tightly secured a piece, D'', of rubber tubing, which firmly embraces the adjacent portion of the rod and closes the joint between the rod and tube, preventing the entrance of air thereinto without, however, interfering with the rotary and advancing motions of the rod when operated by the handle G'.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A cartridge-shell adapted to be charged with air, consisting of a shell having a tubular head and base, a screw-plug removably fitted to said head, and a rod or plunger passing through the base into the shell and connected with said plug, whereby by rotating said rod the plug is unscrewed and the air is released from the shell at the front end thereof, substantially as and for the purpose set forth.

2. In a cartridge-shell, a shell with a tubular head and base at opposite ends, a removable plug fitted to the head, and a rod or plunger passing through the base into the shell and connected with said plug, in combination with rubber tubing closing the joint between the rod or plunger and tubular base, substantially as and for the purpose set forth.

WILLIAM T. CHAMBERLAIN.

Witnesses:

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