(No Model.)

J. B. DAVIS.

GAS CHECK FOR ORDNANCE.

No. 318,093. Patented May 19, 1885.

Fig. 1.

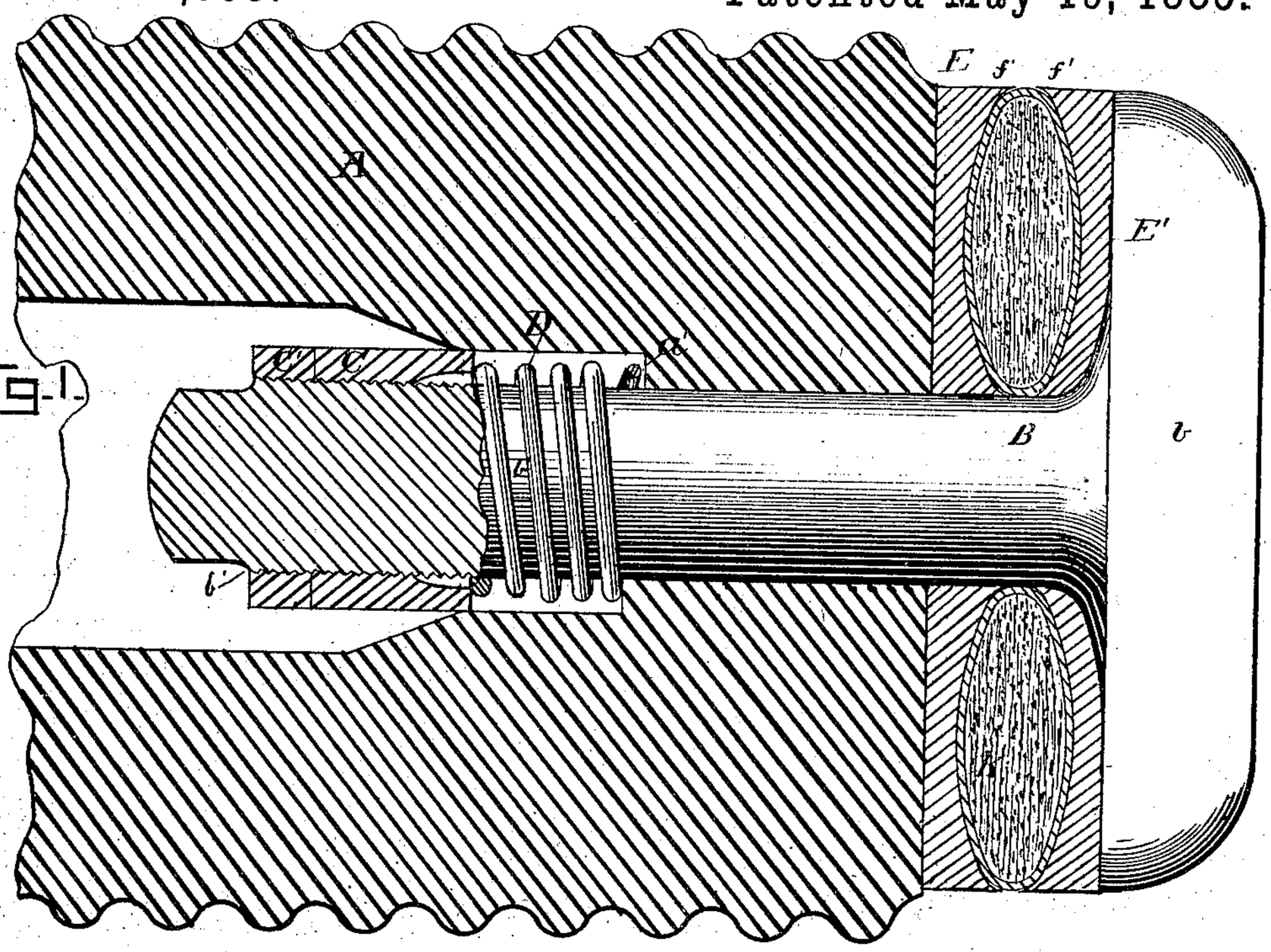


Fig. 2.

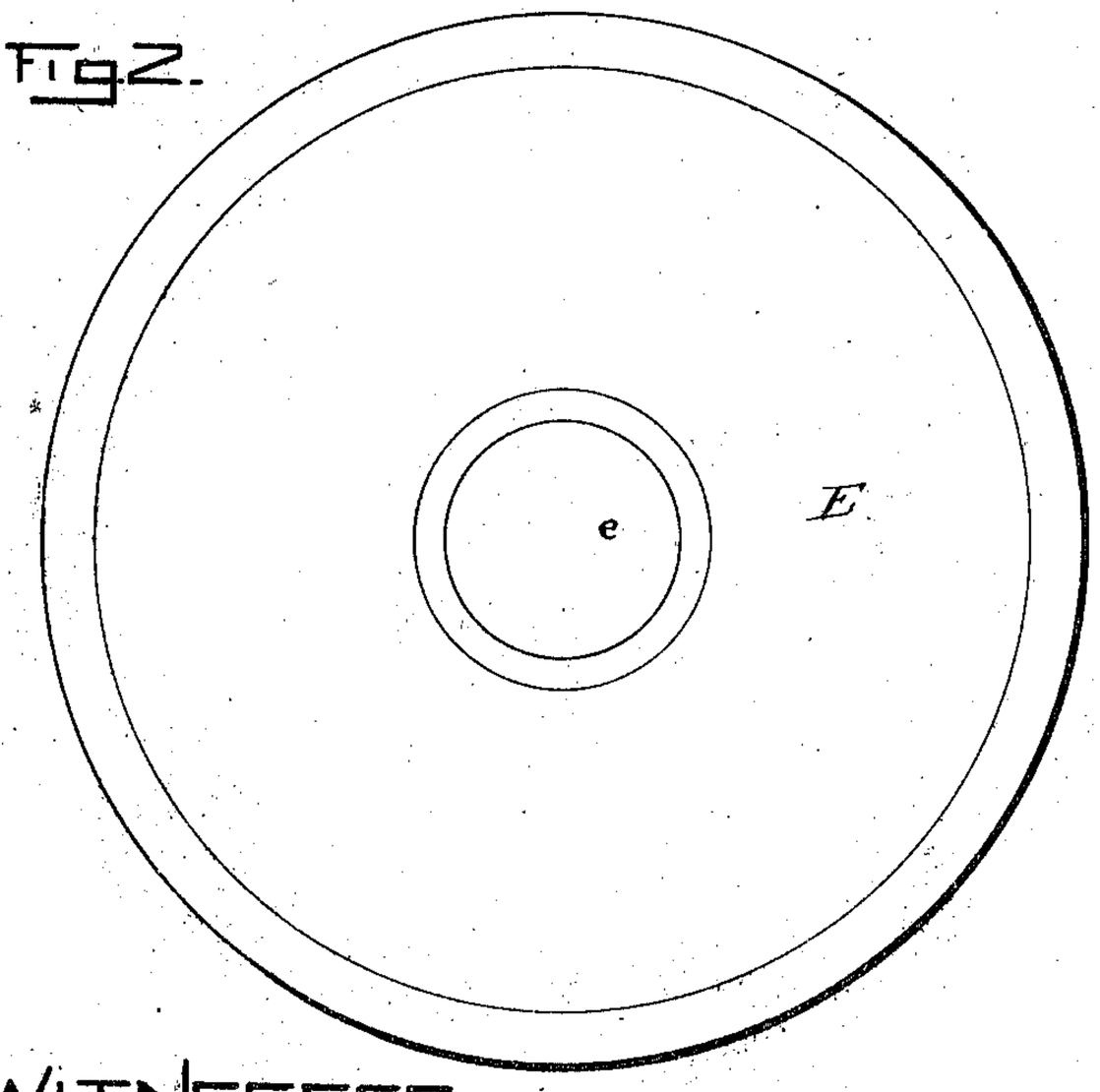
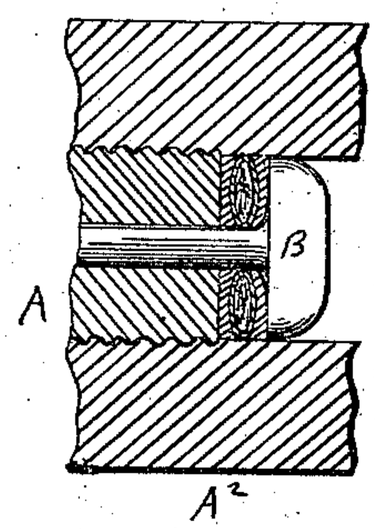


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JAMES B. DAVIS, OF WASHINGTON, DISTRICT OF COLUMBIA.

GAS-CHECK FOR ORDNANCE.

SPECIFICATION forming part of Letters Patent No. 318,093, dated May 19, 1885.

Application filed December 23, 1884. (No model.)

To all whom it may concern:

Be it known that I, JAMES B. DAVIS, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Gas-Checks for Breech-Loading Ordnance, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to gas-checks for breech-loading ordnance; and it consists in certain improvements, as hereinafter set forth and claimed.

The object of the invention is to produce a gas-check which will operate perfectly to close the breech of a breech-loading cannon against gas escape, and which will not "set" in expanded position.

Prior to my invention gas-checks somewhat similar to mine had been used, but the rings were of soft metal, and it frequently became necessary to pass a rod into the gun from the muzzle in order to start the breech after firing.

My invention is particularly intended as an improvement on Patent No. 301,220, of July 1, 1884.

In the drawings, Figure 1 is a longitudinal section of a portion of the breech-plug of a gun with my gas-check applied. Fig. 2 is a face view of one of the gas-rings. Fig. 3 is a view of the gas-check in position in the breech of a gun.

A indicates the breech-plug, which is usually provided with a mutilated screw-thread to secure it in the breech of the gun A^2.

B is the so-called "mushroom," the head *b* forming the front of the breech-plug. The stem *b'* of the mushroom is screw-threaded, and lock-nuts C C' on said stem bear against the spring D, which rests against the shoulder *a'* in the plug, serving to draw the mushroom toward the rear of the plug with a spring-pressure.

E E' are steel plates having central holes, *e*, for the passage of the mushroom-stem, and being concaved between the central stem and the outer edges. The edges *f f'* of the plates E E' are brought nearly to knife-edges. The periphery of each plate is a cylinder which will just enter its seat in the gun. In the annular space between the plates E E' there is a bag or cushion, K, preferably of canvas, said bag being filled with a slightly-compressible fibrous material, as asbestus and tallow. The plates E E' and the packing between them can be removed by unscrewing the nuts and removing the mushroom.

I find it more convenient in manufacture to make the rings E E' separate from the plug and mushroom than to turn them up solid with those parts.

When a gun having this gas-check in position is fired, the backward pressure of the powder-gas on the mushroom expands the bag and its filling radially, which also expands the knife-edges of the rings at *f f'*, making a tight joint.

A compound plate of brass and tin or brass and copper has been used in the location of one of my plates E E', but said plate differed from mine in material, in structure, and in function.

I claim—

1. In combination with the breech-plug and mushroom-head, a pair of steel rings surrounding the stem of said head, said rings having annular concave spaces in their proximate faces, and a textile bag filled with fibrous material between said plates, substantially as described.

2. The combination, with the breech-plug of a heavy gun, of a mushroom-head secured thereto by nuts on the mushroom-spindle, a spring pressing the mushroom backward, a pair of steel rings, E E', between the head and plug, and an elastic cushion between the steel rings, all substantially as shown and described.

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

JAMES B. DAVIS.

Witnesses:

W. A. BARTLETT,

J. HARRY STUART.