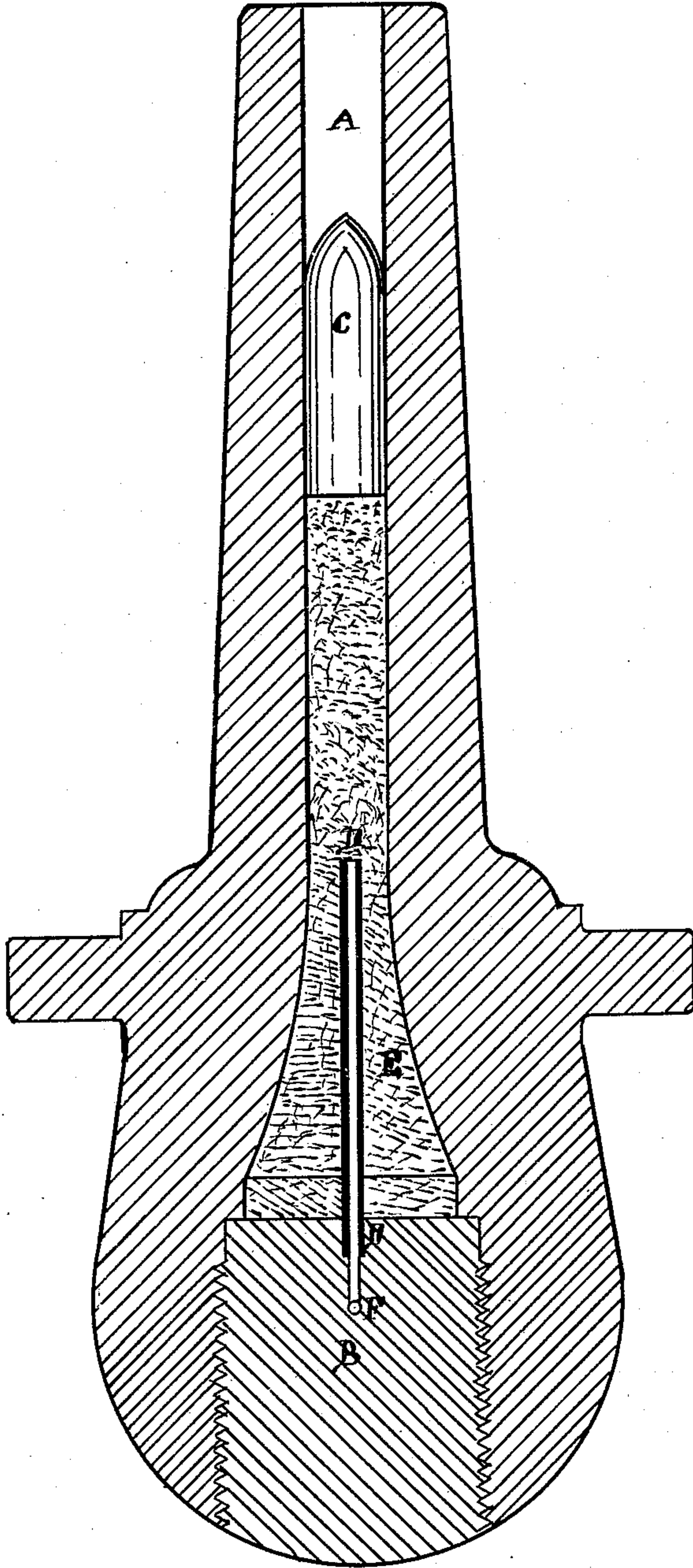


(No Model.)

J. H. STEWART.
BREECH LOADING ORDNANCE.

No. 286,649.

Patented Oct. 16, 1883.



Witnesses.
G. L. Pierce,
John M. Curtis

Inventor.
J. H. Stewart

UNITED STATES PATENT OFFICE.

JULIUS H. STEWART, OF SAN FRANCISCO, CALIFORNIA.

BREECH-LOADING ORDNANCE.

SPECIFICATION forming part of Letters Patent No. 286,649, dated October 16, 1883.

Application filed December 14, 1882. (No model.)

To all whom it may concern:

Be it known that I, JULIUS HENRY STEWART, a citizen of the United States, residing in the city and county of San Francisco, and State of California, have invented a new and useful Improvement in Fire-Arms, of which this, with the accompanying drawing, is a specification.

The object of my invention is to get the best effect possible of the powder consumed by keeping up an increased combustion until the ball or projectile has left the mouth of the gun.

The figure is a longitudinal section of a cannon.

A is the barrel; B, the breech-pin; C, the projectile; D, the tube through which the fire is conducted to the powder in the exploding-chamber. E is the exploding-chamber, and F the vent-hole leading to the outside of the gun and provided with some one of the well-known methods of igniting the powder within.

It will be observed that the tube D is securely fastened to the breech-pin B, the other end terminating exactly at one-half the distance between the breech-pin and the projectile, thereby igniting the powder in the center, causing it to burn in both directions; but as the area toward the breech is constantly increasing, consequently more powder is burned in that direction, and the projectile is gradually accelerated as it approaches the mouth of the gun. In case a cartridge is used, then the tube will be attached to it and not to the breech-pin, as shown in the drawing.

I wish to call special attention to the curved sides of the lower half of the exploding-chamber E. I have discovered by experiment, since my application, that this particular form is conducive of far better results, which is shown by the greater penetration of the pro-

jectile, than any other form, for the reason that when the powder is first exploded the explosion takes place at the end of the tube D which is located in that part of the chamber which has an area equal to that of the projectile. Consequently the smallest quantity of powder is being burned while the inertia of the projectile is being overcome. It is obvious that after the projectile has once been put in motion, and it can be followed up with an accelerating power—such as would be the case by the combustion of a continuous and increasing quantity of powder until the projectile has reached the mouth of the gun—the greatest possible velocity would be acquired, and to produce this result I burn as little powder as possible at the commencement, and as much as possible at the end of the explosion, and that this result is obtained in actual practice, repeated experiments have proven. I also claim another great advantage by exploding the powder in this particular manner. It is a well-known fact that in ordinary guns the greatest strain, and consequently the greatest recoil, is produced by putting the projectile in motion—that is, by overcoming its inertia; but by my method of burning powder the inertia is overcome so gradually that the strain is greatly diminished, thereby prolonging the life of the gun.

Having illustrated and described my invention, what I deem new, and desire to obtain by Letters Patent, is—

A fire-arm with an exploding-chamber having curved sides, in combination with the tube D, substantially as and for the purpose set forth.

J. H. STEWART.

Witnesses:

G. L. PIERCE,

JOHN E. HAMILL.