P. J. KELLY.

GUN.

APPLICATION FILED JAN. 6, 1913.

1,166,837.

Patented Jan. 4, 1916.

Fig. 1.

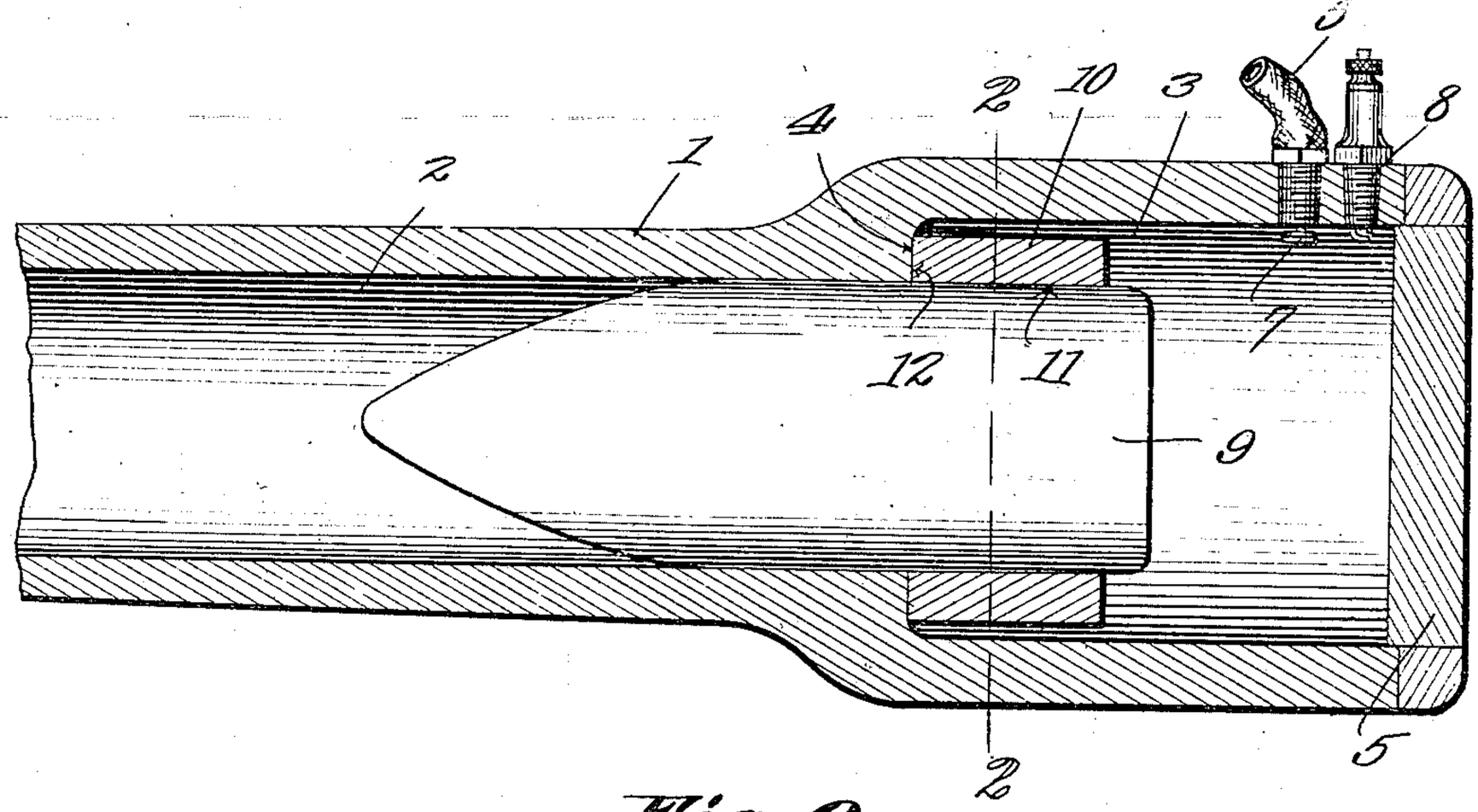


Fig. 2.

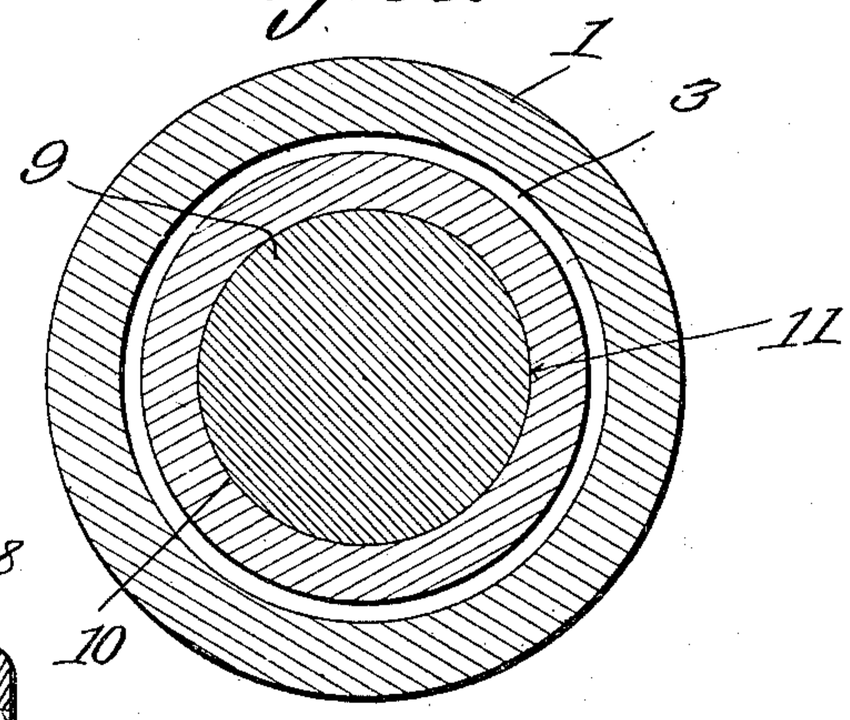
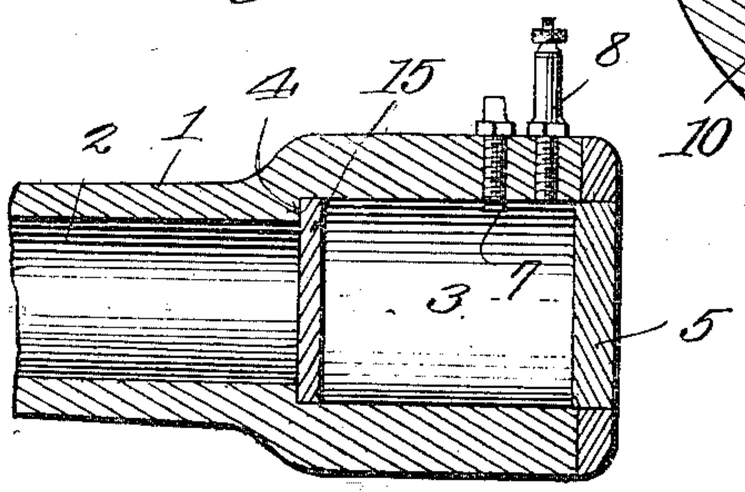


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

PATRICK J. KELLY, OF ELIZABETH, NEW JERSEY.

GUN.

1,166,837 Specification of Letters Patent. Patented Jan. 4, 1916.

Application filed January 6, 1913. Serial No. 740,496.

To all whom it may concern:

Be it known that I, PATRICK J. KELLY, a citizen of the United States, residing at Elizabeth, in the county of Union and State of New Jersey, have invented a new and useful Gun, of which the following is a specification.

The present invention relates to improvements in guns, the primary object of the invention being the provision of a gun of the type in which the projectile is propelled due to the ignition and explosion of gas or combustible material within a chamber formed in the breech of the gun, the primary object of the invention being the provision of coöperable means carried by the projectile adjacent the base thereof and within the chamber to provide a gas tight joint at the breech of the barrel to cause the concentration of the propelling force upon the base of the projectile, the contact of the ring upon the projectile being such as to permit of the movement of the projectile therethrough and out of the barrel.

A further object of the present invention is the provision of a gun of large caliber, for use upon war ships and forts, by which, due to the construction of the breech thereof and the employment of a gas forming liquid or any other suitable gas, such as gasolene, alcohol or cotton or other material saturated with a hydrocarbon fluid, as a propelling medium, the projectile will be properly and efficiently projected through the barrel, thus providing a gun which is safe to operate and in which the cost of manufacture and operation is reduced to a minimum.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings—Figure 1 is a longitudinal sectional view through the breech of a gun constructed according to and embodying the present invention, with a projectile in position for firing. Fig. 2 is a section taken on line 2—2 of Fig. 1. Fig. 3 is a view illustrating the gun, when used for firing blank or a salute.

Referring to the drawings, the gun 1 which is constructed similarly to guns of large caliber now employed, comprises the barrel 2 having the enlarged breech chamber 3 at the breech end thereof and providing the annular shoulder or wall 4 surrounding the breech end of the bore and arranged at right angles to the axial line of the barrel, the purpose of which will presently appear. The breech block 5, of any desired construction, is employed, to seal the rear open end of the chamber 3 while led to this chamber is a gas or liquid conducting pipe 6, provided with a check valve 7 so that the explosion of the gas within the chamber 3 will be excluded from the conduit 6. In order to ignite the charge within the chamber 3 a jump spark plug 8 or any other ignition device, may be employed.

A projectile 9, which is of conventional shape, has disposed about the cylindrical base end 11 thereof, a ring or gasket 10, whose forward face 12 is adapted to abut the wall 4, and thus provide a gas tight joint thereat, so that the explosion of the liquid or gas within the chamber 3 will be exerted upon the projecting base end of the projectile beyond the ring 10, and as the friction between the ring 10 and the projectile 9 at 11 is such as to exclude the passage of the gases therebetween, but to permit the propulsion of the projectile through the ring, which is prevented forward movement by the shoulder 4, the projectile 9 will be propelled through the barrel 2.

By this construction of gun, the charge of gas for propelling the projectile 9 may be varied so that the range of the projectile will be variable and the trajectory may be increased or diminished according to the distance that is necessary to propel the projectile.

By the construction of the valve conduit 6, a charge of gas is properly admitted to the chamber 3 after the projectile 9 has been placed within the barrel with the ring 10 forced into engagement at 12 with the wall 4, after which time, the sparking device 8 is energized to ignite the gas or other charge within the chamber 3, the ignition and expansion of which will cause the propulsion of the projectile as described.

What is claimed is:

In a gun, a barrel having a bore and provided with an enlarged breech chamber defining a shoulder; means for conducting an explosive charge to the chamber; means for

igniting the charge; a projectile in the bore and extended into the chamber; a single ring surrounding the projectile and frictionally held thereon, the ring engaging the shoulder, the periphery of the ring being spaced from the wall of the chamber to admit gas onto the periphery of the ring, thereby to compress the ring onto the projectile, the rear face of the ring being directly subjected to gas pressure when said ring is in abutment with the shoulder.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

PATRICK J. KELLY.

Witnesses:

CHARLES W. TOCKNELL,

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