T. J. BRADFORD.

MULTIPLE BREECH GUN.

APPLICATION FILED OCT. 29, 1918.

1,298,447.

Patented Mar. 25, 1919.

2 SHEETS—SHEET 1.

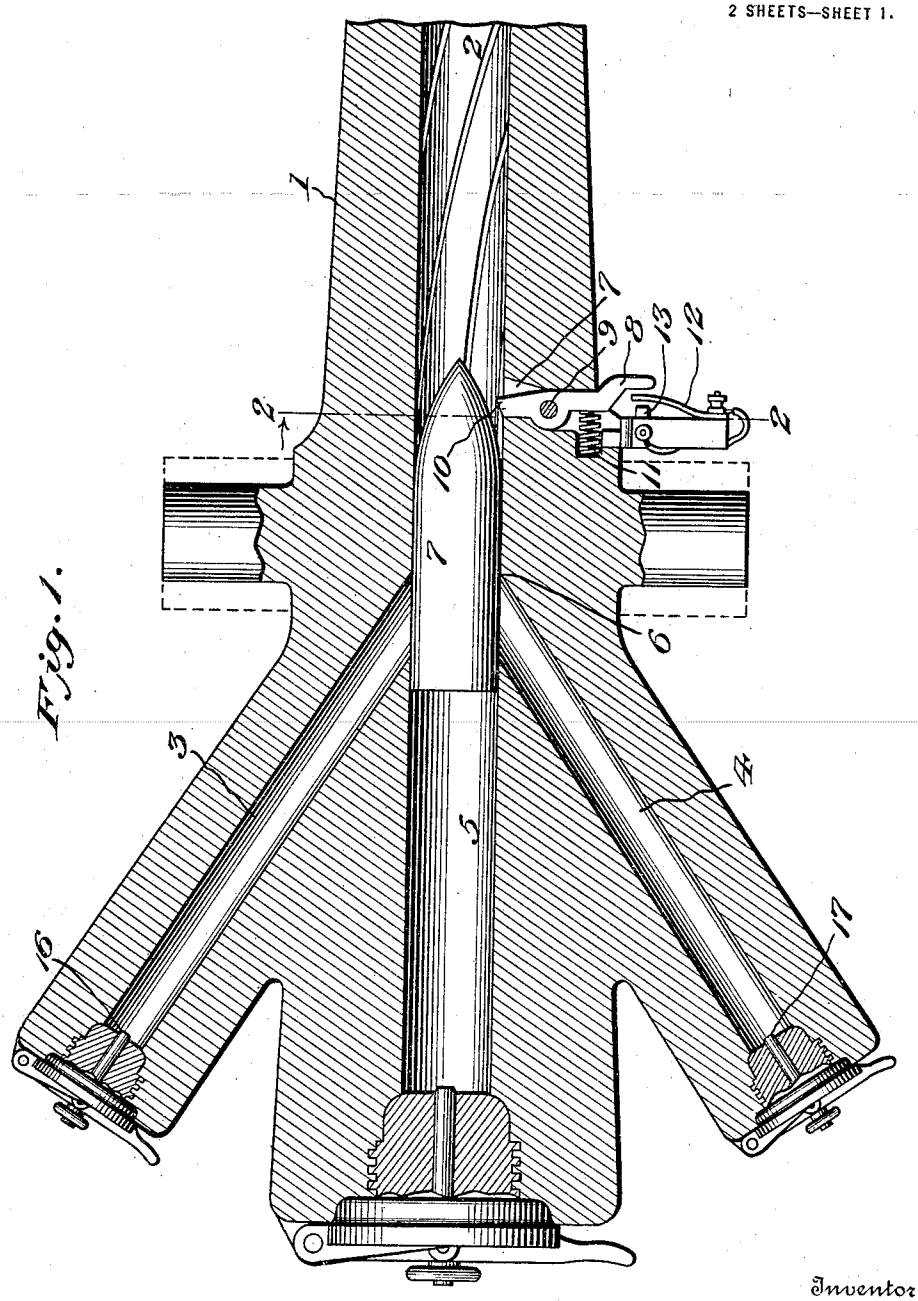

Fig. 1.

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Fig. 1.

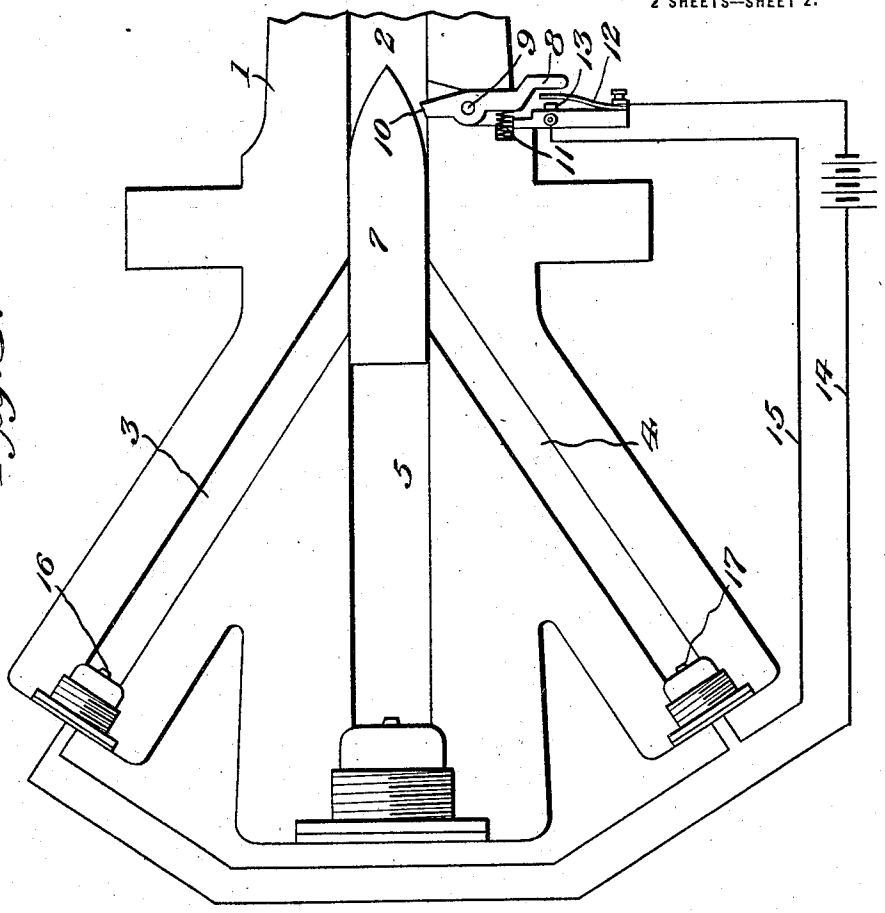
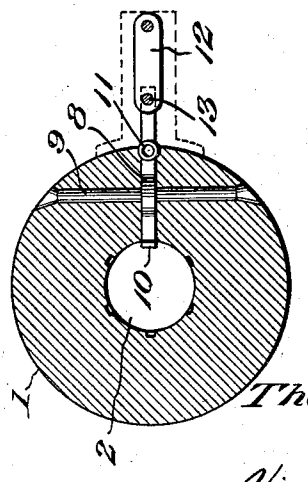


Fig. 2.



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UNITED STATES PATENT OFFICE.

THOMAS JEFFERSON BRADFORD, OF LORANE, OREGON.

MULTIPLE-BREECH GUN.

1,298,447. Specification of Letters Patent. Patented Mar. 25, 1919.

Application filed October 29, 1918. Serial No. 260,181.

To all whom it may concern:

Be it known that I, THOMAS J. BRADFORD, a native of Indiana and a citizen of the United States, residing at Lorane, in the county of Lane and State of Oregon, have invented new and useful Improvements in Multiple-Breech Guns, of which the following is a specification.

This invention is an improved multiple breech gun for use as an anti-aircraft gun and also for other purposes in which high velocity, a flat trajectory and long range is required, the object of the invention being to provide an improved gun which is provided with auxiliary breech bores in addition to the main bore and with means to cause the charges in the auxiliary bores to be fired after the main charge has been fired and while the projectile is still in the gun so that the force of the explosion of all of the charges is utilized and the power and range of the gun is greatly increased.

With the above and other objects in view, the invention consists in the construction, combination and arrangement of devices hereinafter described and claimed.

In the accompanying drawings:—

Figure 1 is a longitudinal sectional view of a multiple breech gun constructed and arranged in accordance with one embodiment of my invention.

Fig. 2 is a detail sectional view of the same on the plane indicated by the line 2—2 of Fig. 1.

Fig. 3 is a diagrammatic sectional plan showing the electric circuits.

My improved gun is here shown as a barrel 1 provided with a main bore 2 and with auxiliary breeches or breech bores 3, 4 in addition to the main breech bore 5, the said auxiliary breech bores being arranged at an angle and converging to the main bore and communicating therewith at a point 6 in which the projectile 7 is arranged when the gun is loaded so that the projectile extends across the ends of the auxiliary breech bores and cuts off communication between the same and the main bore.

In one side of the barrel and at a point in front of the projectile is an opening 7 in which a trigger 8 is arranged, said trigger being here shown as pivotally mounted as at 9 and as having a beveled inner end 10. A spring 11 is employed which normally holds the trigger in such position that its beveled inner end extends slightly into the main bore and in advance of the projectile and so that when the main charge is fired the projectile engages the beveled end of the trigger as it passes thereover and hence turns the trigger in one direction on its pivot against the tension of the spring. The trigger when thus turned operates circuit closers 12, 13 in electric circuits 14, 15, respectively, and which circuits respectively also include electric primers 16, 17 in the auxiliary breeches 3, 4 so that the charges in the auxiliary breeches are ignited and exploded after the main charge has exploded and before the projectile reaches the muzzle of the gun so that the force of the explosion of all of the charges is utilized in hurling the projectile and hence the velocity of the projectile is greatly increased, its trajectory is flattened and the range of the gun greatly increased so that the gun can be advantageously used as an anti-aircraft gun and for other special purposes in which such qualities are required.

The auxiliary breech bores are each of half the cubic capacity as the main breech bore but this proportion may be varied. While the gun is here shown as provided with two auxiliary breech bores this number may also be varied within the scope of my invention.

Having thus described my invention, I claim:—

1. A gun of the class described, having a main bore and auxiliary breech bores communicating with the main bore and arranged at a point where said auxiliary breech bores are closed by the projectile when the gun is loaded and firing means for the charges in the auxiliary breech bores said firing means including a controlling element arranged in the path of the projectile and for operation thereby so that the charges in the auxiliary bores are exploded after the main charge has been exploded and before the projectile reaches the muzzle of the gun.

2. A gun of the class described, having a main bore, an auxiliary breech bore communicating with the main bore, a trigger projecting into the main bore and arranged to be operated by the projectile and firing means for the auxiliary charge and controlled by the trigger.

3. A gun of the class described, having a main bore, an auxiliary breech bore com-

municating with the main bore, a trigger projecting into the main bore and arranged to be operated by the projectile and firing means for the auxiliary charge and controlled by the trigger, the trigger being pivotally mounted and having a beveled inner end and being provided with a spring to normally cause said beveled inner end to project into the main bore and the said firing means including an electric circuit having a circuit closer arranged for operation by the trigger.

In testimony whereof I affix my signature.

THOMAS JEFFERSON BRADFORD.