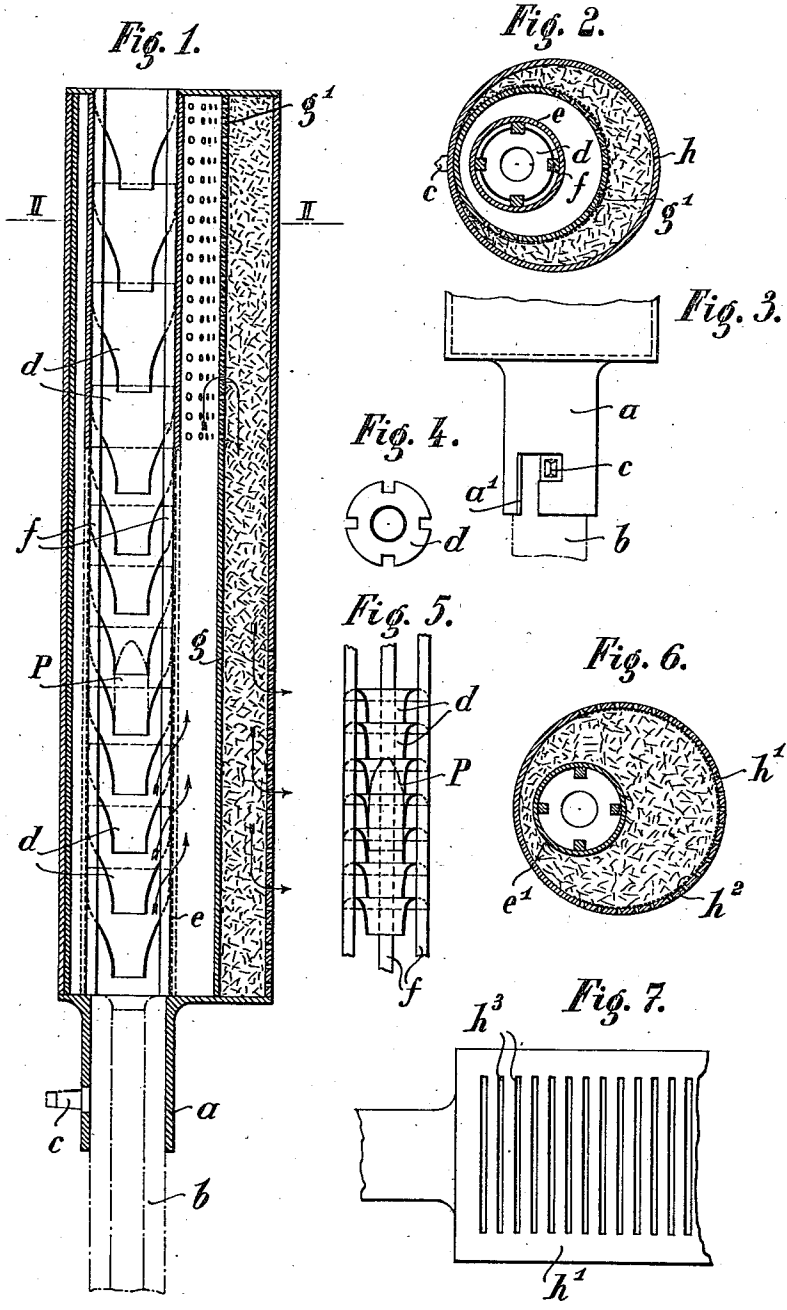


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 DEVICE FOR THE SUPPRESSION OF THE REPORT OF FIREARMS.
 APPLICATION FILED NOV. 2, 1910.

1,000,702.

Patented Aug. 15, 1911.



Witnesses:
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UNITED STATES PATENT OFFICE.

EUGÈNE THURLER, OF FRIBOURG, SWITZERLAND.

DEVICE FOR THE SUPPRESSION OF THE REPORT OF FIREARMS.

1,000,702.

Specification of Letters Patent. Patented Aug. 15, 1911.

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To all whom it may concern:

Be it known that I, EUGÈNE THURLER, a citizen of the Swiss Confederation, residing at Fribourg, of the Swiss Confederation, have invented certain new and useful Improvements in Devices for the Suppression of the Report of Firearms, of which the following is a specification.

This invention relates to devices for lessening the report of fire-arms. According to this invention the energy with which the gases of combustion travel is destroyed by guiding said gases through a certain number of chambers which are arranged at a certain distance apart the one before the other and which have passages for the projectile. The gases are thus deviated from the trajectory and made to expand generally in said chambers.

The devices according to this invention differ from the devices of known types and serving for the same purpose by the arrangement that the said expansion chambers have the shape of conical sleeves which are mounted in a casing the rear end of which is perforated or formed of wire gauze for $\frac{2}{3}$ of its length. The inner casing is further inclosed in one or more mantles which are alternately perforated at the front or at the rear end. The gases which are compressed at a very high degree of pressure when they are being generated are thus quickly deviated from the trajectory of the projectile. The gases escaping through the perforations of the casings, getting hot of the conical sleeves is prevented.

In the accompanying drawing, a plan of execution of the object of the present invention is shown as applied to a rifle-barrel.

Figure 1 represents a horizontal longitudinal section of the apparatus. Fig. 2 shows a cross section along the line II—II (see Fig. 1). Figs. 3 and 4 have reference to the details of the device shown in Figs. 1 and 2. Figs. 5 to 7 show the details of three modifications.

The device represented in Figs. 1 to 4 has a sleeve *a* the internal diameter of which is equal to the outer diameter of the barrel *b*. An angular slot *a'* (Fig. 3) at the free end of the sleeve *a* serves to fix the device to the barrel *b*, said slot being pushed over the sight *c*. The interior of the apparatus is provided with a series of tubular sleeves *d* placed co-axially in the tube *e*. This tube

e is doublewalled and it is made for two-thirds of its height of fine net-work, the remaining third being of sheet metal. The sleeves *d* are conically enlarged toward the front end. The narrow rear ends are all turned toward the barrel *b* and constitute together a canal for the projectile *P*. The sleeves *d* have at the front end four slots through which are passed four rods *f* fixed on the inside of the tube *e* and serving to maintain the sleeves *d* at a given distance from each other so that each two succeeding sleeves form a curved passage for the compressed gas. The tube *e* is surrounded by a second tube *g* of a greater diameter than *e*, the position of which is eccentric with regard to the common axis of the tubular sleeves *d*. This tube *g* is perforated at the first part *g'* for one-third of its length. A third tube *h* perforated at its rear part for one-third of its length surrounds the tube *g*. The space between *g* and *h* is filled with shavings of metal, such as aluminium. The position of the tube *h* is also eccentric with regard to the axis of the sleeves *d* so that the sight *c* projects over the device for a few millimeters.

The direction followed by the compressed gas is shown by the arrows. The projectile *P*, on leaving the barrel *b*, enters into the channel formed by the narrow extremities of the sleeves *d* closing this channel to the compressed gas which rushes consequently through the annular openings of the tube *e* into the space between the tubes *e* and *g* where it partially expands. From there the gas escapes through the narrow openings of the first or forward third of the tube *g* into the space between *g* and *h* where the gas is prevented from expanding instantly owing to the filling of metal shavings, the escape of gas through the openings in the tube *h* taking place without any report. The solid wall of the forward part of the tube *e* prevents the gas from entering the sleeves *d* thus escaping by the central channel before the shot. The more elongated the form of the sleeves the less the gas will endeavor to penetrate into the passage for the projectile.

It is observed that the tube *e* does not touch the wall of the tube *g* at its upper part; there is still a space of a few millimeters between *e* and *g* which is necessary for the free passage of the gas around the

tube *e*. If this tube were to touch the tube *g* the result would be a pressure on the projectile causing the same to deviate.

Experiments have shown that the recoil of a gun fitted with the above described device is only very slightly diminished, the automatic reloading by recoil could therefore be accomplished.

Fig. 5 shows a modified construction according to which the tubular sleeves are differently shaped than in the first instance. According to Fig. 6 the tube *g* on this device has been suppressed. The entire space between the tubes *e'* and *h'* is filled with metal shavings. A net-work *h²* has been applied to the inside of the perforated portion of the tube *h'*. Fig. 7 shows slots *h³* provided in the tube *h'* for the escape of the gas.

I claim:—

An improved device for lessening the report of fire-arms in which the compressed gases are deviated from the trajectory of

the projectile by means of consecutive elements which form a channel for the passage of the projectile, comprising in combination a certain number of elements consisting of conical sleeves, a tube inclosing said elements and perforated for two thirds of its length from the front end to the rear, an eccentric casing surrounding said tube and composed of two tubes of which the inner one is perforated at the front part about one third of its length, the outer tube being perforated at the rear part for about one third of its length and a filling of metal shavings in the space between said tubes substantially as described and shown and for the purpose set forth.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

EUGÈNE THURLER.

Witnesses:

ALBERT DE CARSALADE,
H. C. COXE.