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Patented Sept. 9, 1919.

2 SHEETS—SHEET 1.



INVENTOR

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Hans Humm.

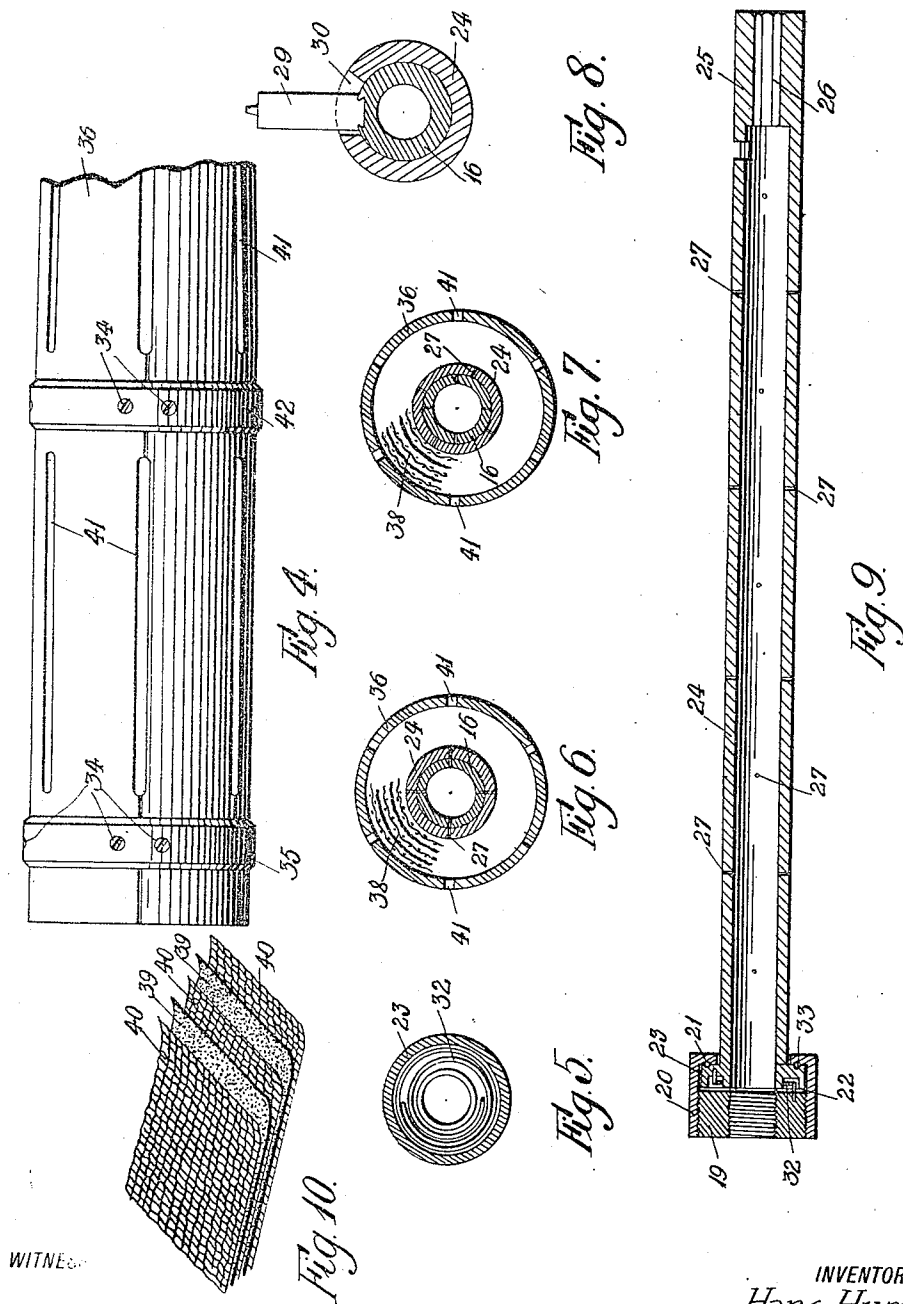
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FIREARM.
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WITNESSES

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FIREARM.

1,315,504.

Specification of Letters Patent.

Patented Sept. 9, 1919.

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To all whom it may concern:

Be it known that I, HANS HUMM, a citizen of the Republic of Switzerland, residing at Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Firearms, of which the following is a specification.

This invention relates to fire-arms, the invention being more particularly related to fire-arms of the type employing rifled barrels.

A principal object of the invention is the provision in a fire-arm having a rifled barrel, of a construction which will permit the powder gases to escape quickly into the atmosphere, the arrangement of parts being such that while the exploding and expanding forces of the powder gases are utilized fully in the usual manner for the discharge of the bullet or projectile, the gases will, nevertheless, be permitted to escape directly and immediately, so that when firing rapidly, there will be a reduction of the resistance to the passage of the bullets or projectiles, and also, as a direct consequence, a lessening of the re-coil action.

Another object of the invention is to provide a construction in which the rotating bullet or projectile will itself serve as the force or agent by which to open the gas vents or passages for the immediate escape of the expanding powder gases.

Another object of the invention is to provide in a gun embodying these features, a filament or insulation, through which the escaping gases must pass in order to filter and reduce to a minimum the smoky products of combustion, which may betray the location of the gun.

With these objects in view and others, the invention resides in the details of construction and in the arrangement and combination of parts hereinafter described, defined in the claims, and shown in the accompanying drawings, forming a material part of this specification; it being understood that changes and alterations in the precise embodiment of the invention herein disclosed may be made within the scope of what is claimed without departing from the spirit of the invention.

In the accompanying drawings:—

Figure 1 is a view in perspective, showing a rifle embodying my improvements.

Fig. 2 is a longitudinal sectional view, the same illustrating the rocker-barrel so turned that the gas vents are out of register.

Fig. 3 is a similar view, but showing the rocker-barrel so turned that the gas vents are in register.

Fig. 4 is an enlarged view, showing the exterior of a fragment of the outer barrel.

Fig. 5 is a cross section, taken in the direction of the line 5—5 of Fig. 3.

Fig. 6 is an enlarged cross section, taken in the direction of the line 6—6 of Fig. 3.

Fig. 7 is a similar view, taken in the direction of the line 7—7 of Fig. 2.

Fig. 8 is a cross sectional view, taken in the direction of the line 8—8 of Fig. 2.

Fig. 9 is a longitudinal sectional view of the rocker-barrel detached, this view illustrating also the mode of journaling the same for turning movement.

Fig. 10 is an enlarged sectional view through a fragment of the filament or insulation.

To illustrate the application of my invention, there is shown in the accompanying drawings, a rifle 15 having a rifled barrel 16, which, in order to carry out my objects, is provided with a plurality of lateral vents or passages 17, arranged preferably in rows or series. Immediately in front of the stock 18, there is threaded or otherwise removably secured upon the barrel 16, a ring 19, upon which in turn is similarly secured a collar 20, formed with an inner annular flange 21 extending spacedly from the said ring 19 to provide an annular space 22 for the reception of the outwardly projecting flange 23, which is formed integral with the end of the rocker-barrel 24 rotatably mounted around the rifled barrel 16. The forward end of the rocker-barrel 24 is formed with a nozzle end 25, comprising an extension of the rifled barrel 16, and having a smooth bore 26, through which the discharged bullet must pass. This rocker-barrel 24 is provided with rows or a series of lateral vents or passages 27 corresponding to the vents or passages 17, and adapted to register therewith. When the rocker-barrel 24 is at rest, its normal position, the vents 17 are closed, but when it is turned, as will presently appear, the vents 27 are brought into register with the vents 17 for the escape of the gases.

It is, of course, academic that a projectile impelled through a rifled barrel, is given rotary motion. When, therefore, a rotating bullet as 28 passes from the rifled barrel 16 into the non-rifled bore 26, the rocker-barrel 24 is turned in an obvious manner, bringing the vents 27 into registry with the vents 17 so that the impelling gases may instantly escape into the atmosphere, it being noted here that the movement of the rocker-barrel is limited by the sight post or mast 29, which rises through the opening 30.

In order to re-position the rocker-barrel after each turning movement, I set in an annular channel 31, provided in the flange 23, a coil spring 32, one end of which is secured in the said flange 23 and the other end thereof in the ring 19. This spring normally urges the rocker-barrel into the position where the vents 17 are positively closed or covered, but under the turning movement of the rocker-barrel, it yields to permit the vents 27 to register with the vents 17. Other and different means may be employed whereby to re-position the rocker-barrel after each action, but the spring means, arranged as described, is what is preferred in the present embodiment of the invention. As a means of reducing friction, anti-friction devices or balls as 33 may be inset in an obvious manner between the confronting faces of the collar flange 21 and the rocker-barrel flange 23.

Secured upon the ring 19 by means of screws as 34 or otherwise, is a coupling ring 35, made preferably of wood, the forward end of which is rigidly connected in a similar manner with an outer wooden barrel 36, made preferably in two longitudinal parts, and extending almost to the sight post 29, where the same terminates in an inwardly projecting annular flange 37, which slidably bears upon the rocker-barrel 24.

The inner periphery of the wooden barrel 36 is lined with a filament or insulation 38 made up preferably of layers 39 of coarsely woven non-inflammable substance, as asbestos, and of netting as 40, consisting preferably of copper wire. This filament occupies all the space intervening between the rocker-barrel 24 and the wooden barrel 36, excepting such slight space as may be necessary to enable the former to turn readily. Besides protecting the rifled barrel, this filament prevents the escaping powder gases from issuing forth in conspicuous jets or columns; and it also breaks up and filters out any coloring of the gases, which might betray the location of the gun.

As best shown in Figs. 1 and 4, the outer wooden barrel 36 is provided with longitudinal openings or slits 41, through which the gases may pass from the filament 38 into the atmosphere. In advance of the locking ring 35, there is threaded upon the

two-part wooden barrel 36 a bracing and strengthening ring 42; and in practice other similar rings may be employed, if needed.

Having thus described my invention, what I claim is:—

1. In a gun having a rifled barrel provided with lateral vents, a rocker-barrel mounted thereon and formed with an end portion extending beyond the nozzle of the rifled barrel and through which the discharged projectile must pass, said rocker-barrel being provided with vents adapted to register with the vents in the rifled barrel, and means for normally holding the rocker-barrel with the vents thereof out of register with those of the rifled barrel.

2. In a gun having a rifled barrel provided with lateral gas vents, a barrel movably mounted thereon and formed with an end portion extending beyond the end of the rifled barrel and through which the discharged projectile must pass, said movable barrel being provided with vents adapted to register with the vents of said rifled barrel, means for normally holding the movable barrel with the vents thereof out of register with the vents of the rifled barrel, and means for limiting the action of the movable barrel.

3. In a gun having a rifled barrel provided with lateral vents, a barrel movably mounted thereon and provided with vents adapted to register with the vents of the rifled barrel, said movable barrel being formed with an end portion extending beyond the nozzle of the rifled barrel and through which the discharged projectiles must pass whereby to effect the moving action and bring the vents into register, an outer barrel provided with slots, and means combined with said outer barrel to break up and filter jets of powder gases.

4. In a gun having a rifled barrel provided with lateral gas vents, a barrel provided with corresponding vents movably mounted on the rifled barrel and formed with an end portion extending beyond the end of the rifled barrel and through which discharged projectiles must pass to effect moving action bringing the vents of the movable barrel into register with those of the rifled barrel, means for normally holding said movable barrel with said vents out of register, an outer barrel provided with slots, and means combined with said outer barrel to break up and filter jets of powder gases.

5. In a gun, the combination of a rifled barrel provided with lateral vents, a barrel movably mounted thereon and provided with vents adapted to register with the vents of the rifled barrel, said movable barrel being formed with an end portion extending beyond the nozzle of the rifled barrel and through which the discharged projectile

must pass to effect moving action bringing the vents of said movable barrel into register with those of the rifled barrel.

6. In a gun, the combination of a rifled
5 barrel provided with lateral vents, a barrel movably mounted thereon and provided with vents adapted to register with the vents of the rifled barrel, said movable barrel being formed with an end portion extending

beyond the nozzle of the rifled barrel and 10 through which the discharged projectiles must pass to effect moving action and register said vents, and means for breaking up and filtering the jets of powder gases.

In testimony whereof I have signed my 15 name to this specification.

HANS HUMM.