Dec. 14, 1937. S. G. GREEN 2,101,848

STABILIZER FOR GUNS

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Fig. 1.

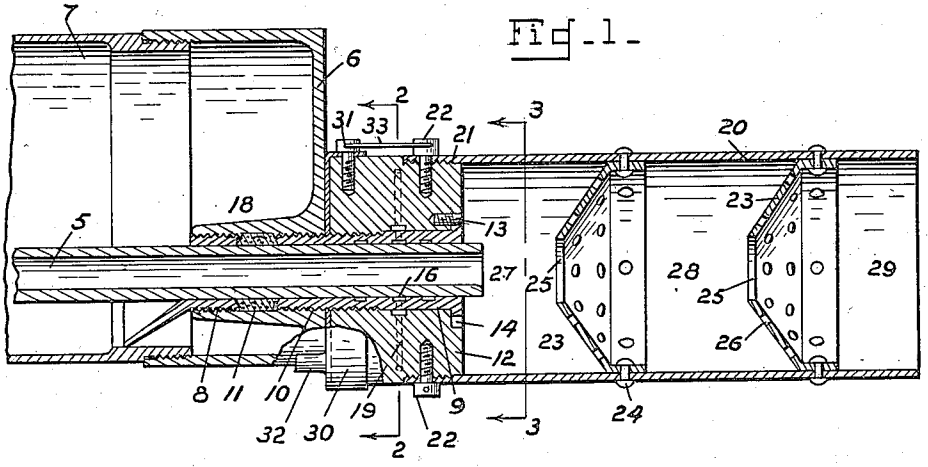


Fig. 2.

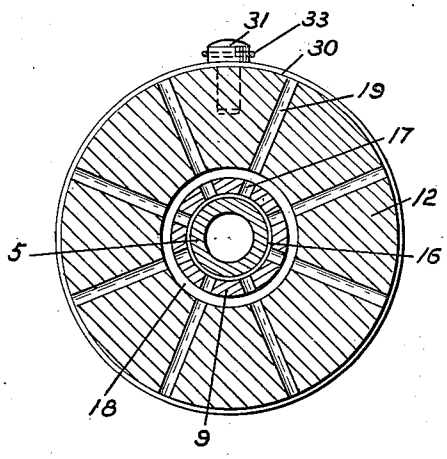
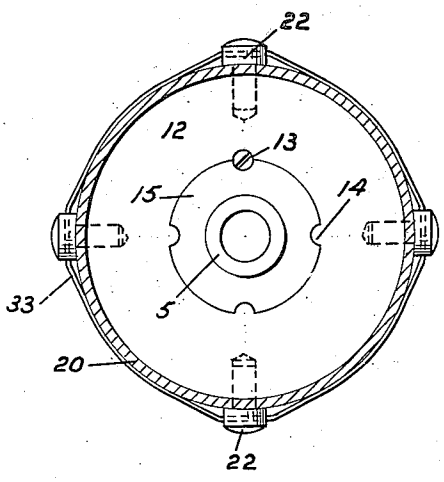


Fig. 3.



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STABILIZER FOR GUNS

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Application October 16, 1936, Serial No. 105,950

2 Claims. (Cl. 89—14)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

The invention described herein may be manufactured and used by or for the Government for governmental purposes, without the payment to me of any royalty thereon.

This invention relates to a stabilizer for guns and more particularly it has reference to the class of muzzle attachments which serve to check recoil, silence the report and eliminate flash and smoke.

The purpose of the invention is to provide a simple and inexpensive stabilizer which will efficiently perform its intended functions and which has a novel mounting that serves to conduct heat from the muzzle of the gun barrel.

To these and other ends, the invention consists in the construction, arrangement and combination of elements described hereinafter and pointed out in the claims forming a part of this specification.

A practical embodiment of the invention is illustrated in the accompanying drawing, wherein:

Fig. 1 is a longitudinal sectional view of the improved stabilizer applied to a machine gun.

Figs. 2 and 3 are detail sectional views on the respective lines of Fig. 1.

Referring to the drawing by characters of reference there is shown the front portion of a machine gun comprising a reciprocable gun barrel 5 extending through the front plate 6 of a water jacket 7. The muzzle of the barrel is supported in a rear bearing 8 and a front bearing 9 which are threaded in an eccentric opening 10 of the front plate and confine a packing 11.

The front bearing 9 projects from the jacket and threadedly carries a large cylindrical block 12 which is assembled onto the bearing before the bearing is inserted in the front plate of the jacket. The block is locked in place on the bearing by a set screw 13 which is threaded in the front face of the block and selectively engages in one of a number of semi-circular recesses 14 formed marginally in a flange 15 on the front end of the bearing 9.

The inner wall of the front bearing 9 is formed with a plurality of annular grooves 16 which are provided to trap some of the gases of discharge when the gun barrel recoils. The gases subsequently escape and prevent the accumulation of carbon between the barrel and the bearing. In order to insure that the gases will not reach the packing 11, one of the grooves 16, preferably the center one, is in communication with a plurality of radial passages 17 leading to an annular groove 18 in the inner wall of the block 12. The groove 18 is vented to atmosphere by radial passages 19.

An imperforate cylindrical casing 20 forming an expansion chamber for the gases of discharge, is mounted on the block 12 and is secured by threaded engagement 21 and by screws 22. A plurality of baffles 23 are arranged in spaced relation within the casing 20 and are marginally secured thereto as by the rivets 24. These baffles are frusto-conical in shape and are pointed rearwardly. They have a central aperture 25 for passage of the bullet from the gun barrel and a large number of apertures 26 for passage of the gases.

When two baffles are used as shown in the drawing there are provided three expansion chambers or compartments 27—28 and 29 between the block 12 and the front end of the casing 20. The chambers and baffles serve to reduce the temperature and velocity of the gases so that they will not flash or smoke when they emerge from the front end of the casing 20. The block 12 serves as a radiator to conduct heat away from the front bearing and the muzzle of the gun barrel.

A cap 30 mounted on the rear face of the block 12 and secured thereto by a screw 31 has an arcuate lip 32 which is eccentric to the block and engages the curved wall of the water jacket 7 to hold the block 12 against rotational displacement. The screw 31 and the screws 22 are locked by means of a wire 33 passing through their heads.

I claim:—

1. In a gun, a jacket having a front plate with an opening, a bearing mounted in the opening and extending in front of the front plate, said bearing having radial vents, a reciprocable gun barrel mounted in the bearing and normally covering the vents therein, a block mounted on the bearing and having vents in communication with the vents of the bearing and leading to atmosphere, and a casing carried by the block for receiving the gases of discharge of the gun.

2. In a gun, a jacket having a front plate with an eccentric opening, a gun barrel having its muzzle extending through the opening in the front plate, a member threadedly mounted in the opening of the jacket and receiving the muzzle of the barrel, and means securable to said member and having an arcuate portion eccentric to said member and engaging the jacket.

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