

July 11, 1950

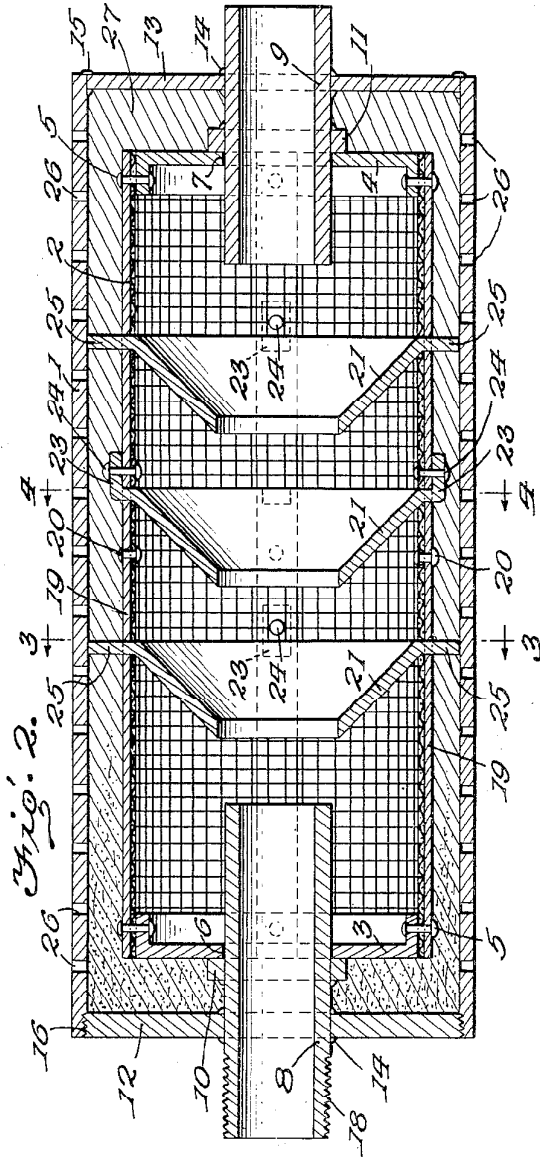
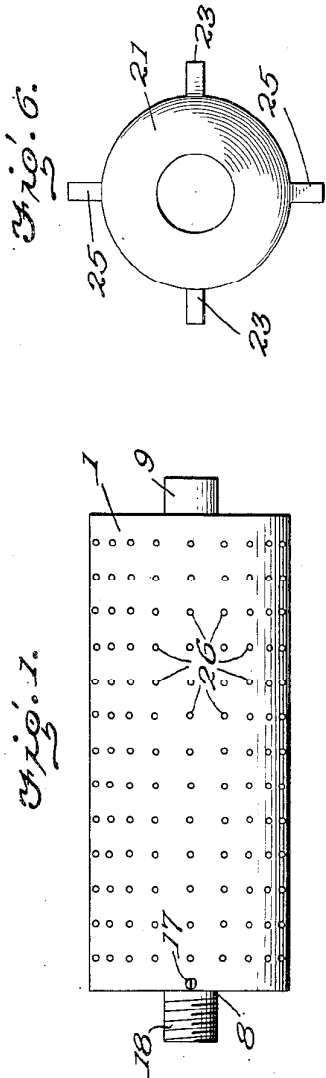
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2,514,996

FLASH-ELIMINATOR AND SILENCER FOR FIREARMS

Filed July 28, 1948

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

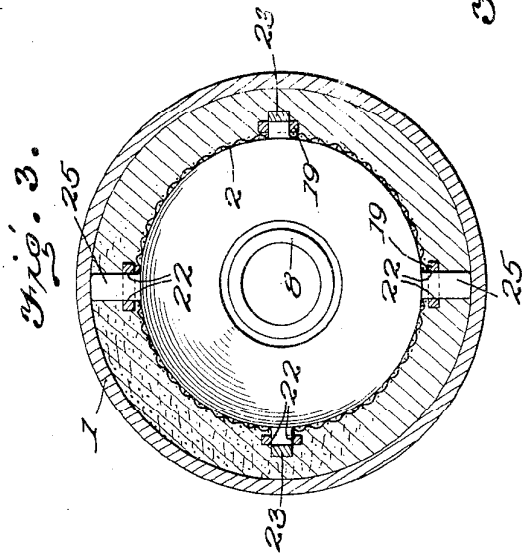
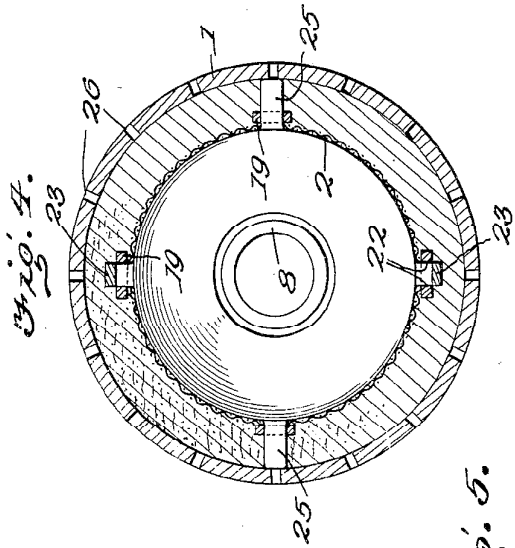
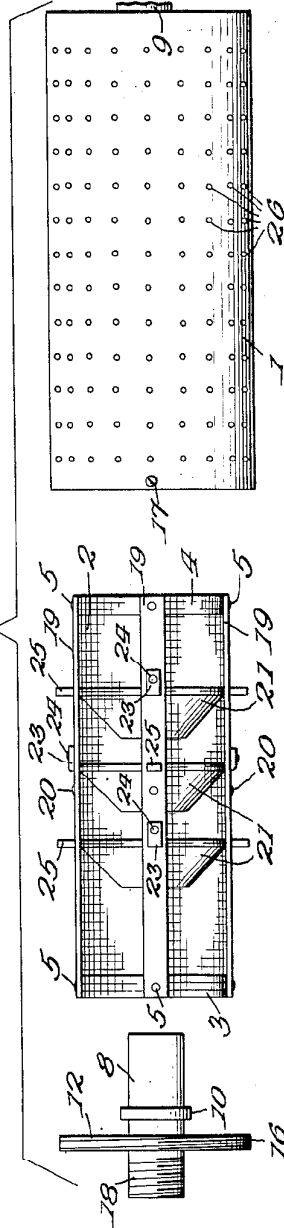


Fig. 5.



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FLASH ELIMINATOR AND SILENCER FOR FIREARMS

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5 Claims. (Cl. 181-42)

1

This invention relates to improved flash-eliminators and silencers for firearms, and more particularly for machine guns. Flash-eliminators and silencers are obviously very important in time of war, in order to prevent the enemy from quickly locating the position of firearms, especially machine guns, which are being used against them, either by observing the flashes or hearing the explosive reports. Thus their use of counter-measures may be delayed indefinitely, with much more successful results, if more improved flash-eliminators and silencers are available. The present flash-eliminator and silencer is just such a device.

The object of the present invention is to construct an improved flash-eliminator and silencer for firearms, which, although very simple in construction and easy to maintain, is very efficient in operation.

A further object is to make a novel flash-eliminator and silencer comprising spaced inner and outer concentric cylindrical perforated casings joined by barrel fittings passing through their end walls, one of said fittings being adapted for rigid attachment to the muzzle of a firearm, the space between said casings being filled loosely with flaked asbestos, and a series of axially spaced, annular, conical deflecting plates in said inner casing around the axial passage between said barrel fittings, and converging in the direction of the muzzle end for deflecting the gases discharged from the muzzle annularly through the asbestos flakes, to attenuate the noise and eliminate the flash which would otherwise occur when the firearm is fired.

Another object is to make the inner cylindrical casing out of wire mesh having end plates bored to receive the barrel fittings and having four axially extending stay bars spaced about 90° apart on the outside of said cylindrical casing.

Another object is to mount the annular conical deflecting plates by means of four ears on each plate extending from its circumference through openings in the four stay bars, alternate ears being turned over said bars and fixed thereto, the other ears extending to the inside wall of the outer casing to properly space said inner and outer casings during assembly.

A further object is to fill the space between the inner and outer casings with flaked asbestos to absorb the noise of the discharge of the explosive gases deflected from the muzzle and to snuff out any possible flashes before the gases pass out through the perforations in the outer casing.

2

A further object is to provide the barrel fittings with stop collars for properly axially spacing the ends of the inner and outer casings, the fittings being rigidly fixed in the ends of the outer casing.

A further object is to provide a threaded connection between the muzzle of the firearm and the muzzle end fitting of the above flash-eliminator and silencer, for easy application and removal of the device from the firearm.

A further object is to provide a threaded connection between the outer casing and its end plate in which one of the end fittings is fixed, the other end plate being permanently fixed to the casing, for easy assembly and disassembly of the device.

Other and more specific objects will appear in the following detailed description of a device constructed in accordance with the present invention, having reference to the accompanying drawings, wherein:

Figure 1 is a side view of the device,

Figure 2 is an axial sectional view thereof shown on a larger scale,

Figure 3 is a cross-sectional view taken on the line 3-3 of Figure 2,

Figure 4 is another cross-sectional view, taken on the line 4-4 of Figure 2,

Figure 5 is an exploded view of the constituent parts of the device, and

Figure 6 is an end view of one of the annular conical deflecting plates.

The device illustrating the present invention comprises concentric cylindrical casings 1 and 2. The inner casing is composed of a wire screen fixed to end plates 3 and 4 by rivets 5 and having central bores 6 and 7 for the barrel fittings 8 and 9 passing therethrough. The fittings 8 and 9 have external collars 10 and 11 respectively for the purpose of properly axially spacing the ends of the inner casing 2 with respect to the ends 12 and 13 respectively of the outer casing 1.

Each barrel fitting 8 and 9 is fixed to its outer casing end 12 and 13 respectively, as by welding 14. The end 13 is likewise rigidly fixed to its casing end by welding 15. The other end of the outer casing 12 may be threadedly connected to its casing end as by threads 16 and locked thereto by set screw 17. The barrel fitting 8 is provided with means for quickly attaching it to the muzzle of a firearm, as by a thread 18 for threaded engagement with a female thread on the muzzle.

The inner casing screen is provided with four stay bars 19 which may be riveted thereto by the rivets 5 and 20, and may be spaced at 90° intervals around said screen.

3

The annular conical baffle or deflecting plates 21 may be three in number, each having four ears around the periphery, for passing through openings 22 in the stay bars 19. Every alternate ear 23 around said plates and along said stay bars is turned down over its corresponding stay bar and fixed to it by a rivet 24, the remaining ears 25 being straight and extending to the inner wall of the outer casing so as to properly space the inner and outer casings in concentric relation. The outer casing is provided throughout its cylindrical wall with perforations 26 for free access of the expanding gases as they escape from the flaked asbestos 27 in the space between said casings into the atmosphere. The flaked asbestos may be fairly tightly packed in this space to provide good and complete attenuation of the noise without causing any appreciable back pressure on the following exploding gases deflected from the muzzle for passage through the screen and asbestos.

The arrangement of parts being symmetrical, any back pressure that might result will act symmetrically on the projectile and will have no tendency to deflect its path, whereby accurate firing is not interfered with. The arrangement described above, furthermore, is very simple to make and lends itself to easy disassembly and reassembly for cleaning, maintenance and repair purposes.

Many modifications in the details of this device may obviously be made without departing from the spirit and scope of this invention, as defined in the appended claims.

What is claimed is:

1. A flash-eliminator and silencer for firearms, comprising a pair of concentric spaced perforated cylindrical casings with spaced end walls and having flaked asbestos filling the space between said casings and said end walls, inlet and outlet barrel fittings passing through the inlet end walls and the outlet end walls of both casings respectively, a series of annular conical baffle plates axially spaced within said inner casing around the direct passage between said barrel fittings, and all convergent toward the inlet end,

4

for deflecting the explosive gases emitted from the nozzle through the perforated casing walls and the flaked asbestos filling to absorb the noise and flashes therein.

2. A flash-eliminator and silencer as defined in claim 1, wherein said inner casing is composed of a cylindrical wire screen having stay bars fixed axially at 90° intervals around it and end walls riveted to the wire screen and the ends of said stay bars.

3. A device as defined in claim 2, wherein the outer casing is provided with end walls in which the barrel fittings are axially mounted and pass through the asbestos fillings and central bores in the end walls of the inner casing, the inlet barrel fitting having means for attachment to the muzzle of a firearm on which it is adapted to be used.

4. A device as defined in claim 3, wherein each of said conical baffle plates has four ears extending peripherally therefrom at 90° intervals for passing through openings in said wire screen and stay bars, alternate ears around each plate and along each stay bar being turned down over said stay bars and riveted thereto, the remaining ears extending to the inner wall of the outer casing to properly position said inner casing within said outer casing.

5. A device as defined in claim 2, wherein the outer casing is provided with spaced annular rows of perforations throughout substantially its entire length.

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