

SILENCER

This silencer design is an improvement of the OSS silencer from WW II and is the forerunner of the silenced Ruger design from issue #4 PMA.

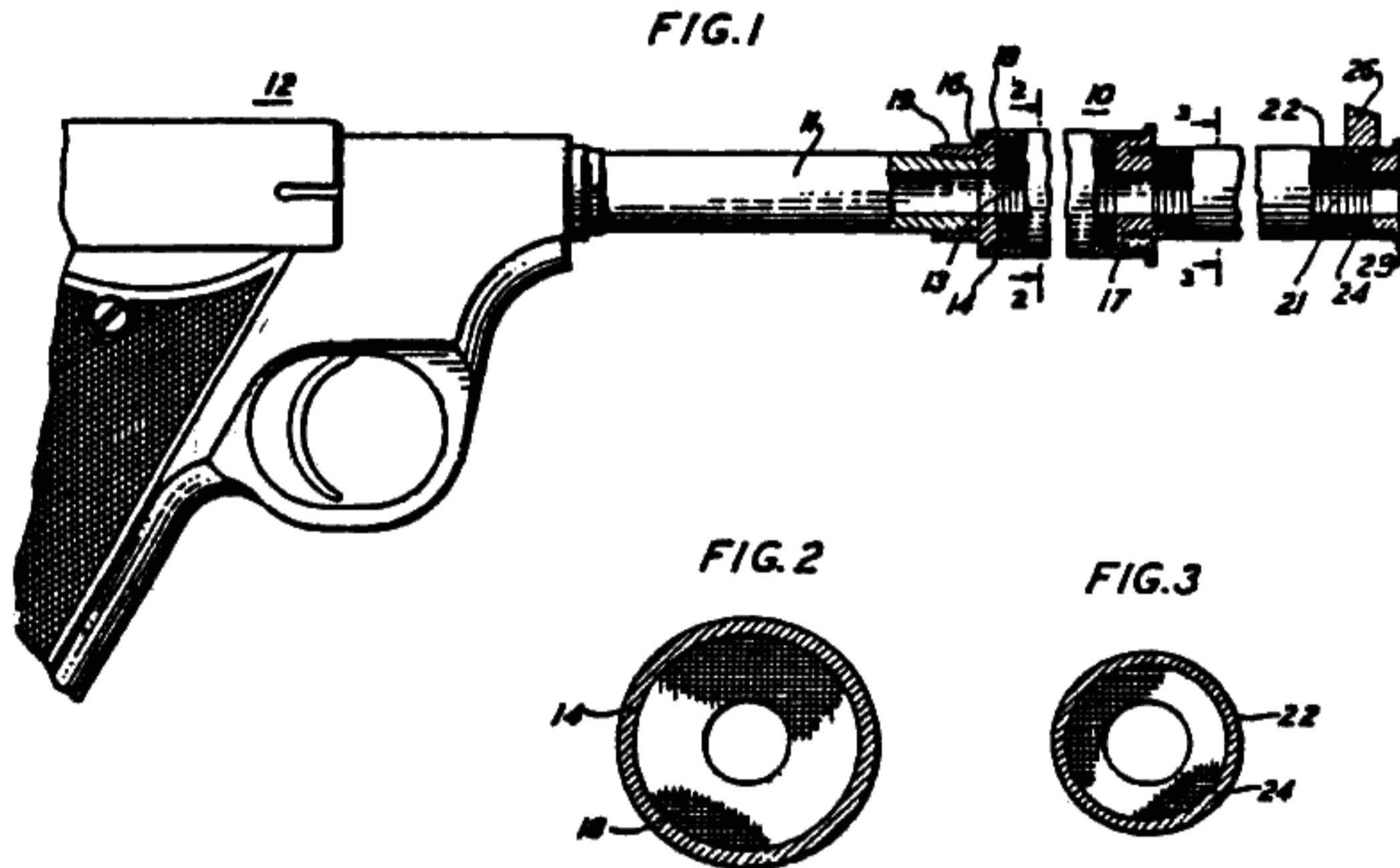
Aug. 31, 1948.

W. P. MASON

2,448,382

SILENCER

Filed Oct. 26, 1944



This invention relates to firearms and more particularly to a silencer for reducing the muzzle blast.

The principal object of the invention is to reduce the noise associated with the muzzle blast of a firearm. Other objects are to reduce the weight, size and cost of a silencer and improve the stability of performance.

Important factors in silencing the muzzle blast of a firearm are the rapid cooling of the power gases and the reduction of pressure before they emerge. An effective silencer utilizing these principles comprises a chamber containing heat absorbing material through which the bullet passes. The effectiveness of such a device depends, among other things, upon its cross-sectional area. Applicant has discovered, however, that the importance of having a large cross-sectional area diminishes considerably toward the front end of the silencer.

FIG. 4

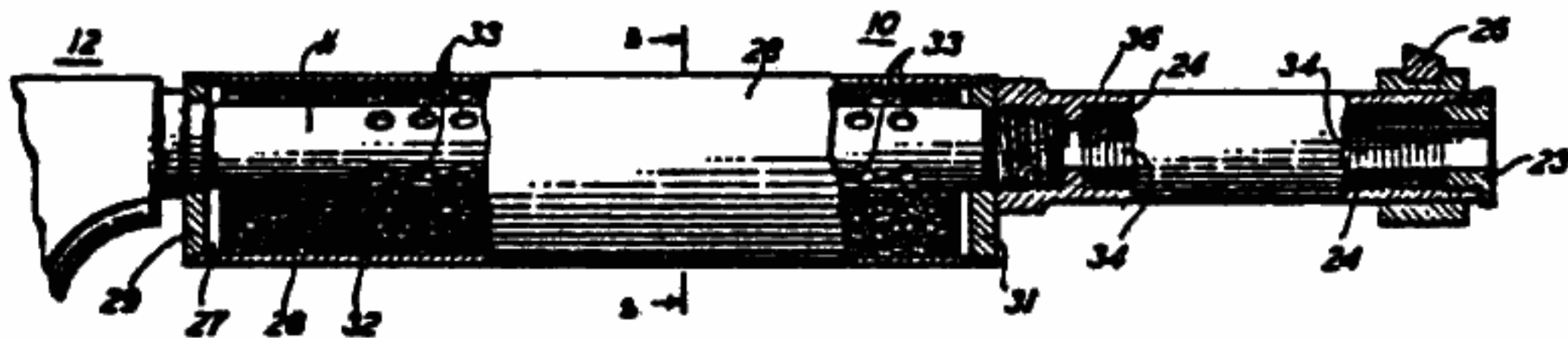
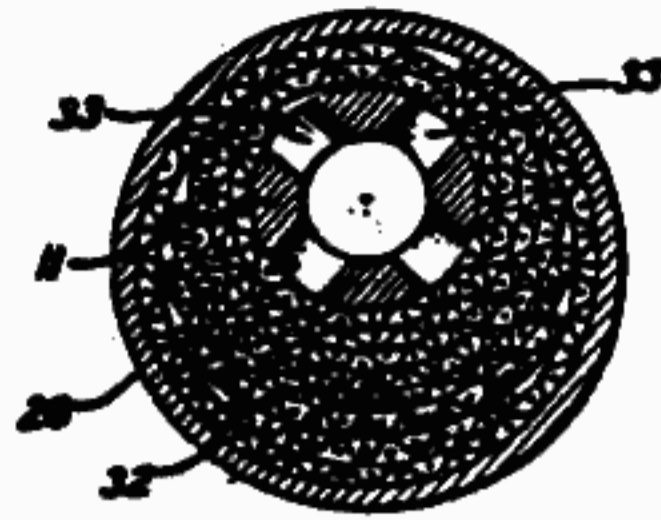


FIG.5



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In accordance with the invention, therefore, the chamber has at its front end a section of reduced cross-sectional area. Weight, size and cost are reduced without seriously affecting the efficiency of noise reduction. The silencer may be built as an attachment or, preferably, the rear portion of the chamber may be built around the barrel of the firearm, with communicating holes through the barrel. The heat absorbing material may be metal screen, which may take the form of apertured discs, stacked one upon another and preferably held in compression. Plating the screen with some metal such as tin before punching the discs will increase the stability of performance. ❀

Flash Powders and their Production

By Dan Moore

Flashpowders are some of the most explosive kinds of powders known. In fact, Lenz* even regards flashpowder as high explosive due to its tremendous power. In addition to this, flashpowders are both easy and safe to manufacture. It is because of this that I have decided to explain in detail the manufacture of these powders.

*Lenz, Robert R., Explosives and Bomb Disposal Guide.

The most common of these powders is "Photoflash" powder or just simply "Flash" powder. This powder is the easiest to manufacture and the least expensive. The equipment needed to make photoflash powder is a mortar and pestle, a scale or balance, and several plastic containers. The chemicals required are; powdered aluminum (Al), sulphur (S), and potassium permanganate (KMnO4). These chemicals should all be finely powdered for best results. (It is best to buy finely powdered aluminum as it cannot be ground. Sulphur and potassium permanganate should be ground separately in the mortar and pestle to a consistency of flour.) The ratio of weight of these chemicals is: one (1) part sulphur, one (1) part powdered aluminum, and eight (8) parts potassium permanganate. After powdering, these chemicals should then be placed in a plastic container and shaken thoroughly for ten (10) minutes to insure even mixing. The flashpowder should then be kept in

a plastic container and stored in a cool dry place.

Another explosive powder which even surpasses photoflash powder is chlorate flashpowder. Chlorate flashpowder is much more powerful than photoflash powder and also much more sensitive. The reason for its increased strength is the use of potassium chlorate (a very powerful unstable oxidizing agent). The equipment needed for making chlorate flashpowder is the same as for photoflash powder with one minor exception. A flat metal pan and a hammer are used to powder the potassium chlorate as the friction from a mortar and pestle could cause an explosion. The chemicals required to manufacture chlorate powder are; potassium chlorate (KClO3), sulphur (S), and powdered aluminum (Al). The ratio by weight of these chemicals is: one (1) part sulphur, one (1) part powdered aluminum, and two (2) parts potassium chlorate. Once again all chemicals should be finely powdered and thoroughly mixed for best results. Chlorate powder should be kept in a plastic container and stored in a cool dry place.

One other flashpowder is a derivative of chlorate powder. This flashpowder is manufactured in the same way as chlorate powder, however

instead of using potassium chlorate, sodium chlorate is used. This may offer an alternative to survivalists as sodium chlorate can be obtained from Solidox (See The Survivor Vol.2, issue #9).

Although I have just listed the basic flashpowders and their manufacture, there are several things that one should know before manufacturing them. To start with, the equipment needed for producing these powders is very basic in nature. Really, the piece of equipment that needs to be purchased is the mortar and pestle, as it would be hard to improvise. The plastic containers can come from just about anywhere. For example, the plastic containers I found to work best were nothing more than plastic butter dishes. The balance that is required can be makeshift just as long as it is reasonably accurate. The balance I used was constructed as such:

A notched wooden dowel is used for the main beam of the balance while a Vacu-vise and an Exacto knife are used as a base. Dixie cups can be used for containing the chemicals during weighing and fishing sinkers are used for weights. I have found this kind of balance to be very successful for the measuring purposes in this article.

One final note about manufactur-

