

Flash bang and tears effect hand grenade

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***Abstract:** The ammunitions are used in many applications to generate material destruction, the destruction of vital force, training, etc. In military applications the desired effects are often destructive, this is achieved by using explosive energy released during the detonation of explosives, by the blast of powder and propellant or combustion of pyrotechnic compositions.*

In the current conditions for military, armed forces, restoring public order forces are confronted with situations when they can not use lethal weapons and ammunition. Therefore there is need able to ban non-lethal ammunition, to intimidate, chase people without causing serious injury. The concept of non-lethal weapons and ammunition was recently changed and acquired a less lethal form which translates the fact that there is still the likelihood of injury, even if the use of such means. For it is proposed to develop a hand grenade with both flash-bang effect and also tears effect. Flash-bang hand grenades are non-lethal explosive devices used to control protesters or rescue missions of captives. Their effect is to destabilize the opponent senses and to cause disorientation. This hand grenade produces a blinding flash and a loud noise without causing permanent damage. Tears effect hand grenades is affecting the mucous membranes of the eyes, nose, mouth and lungs and causes problems such as tearing, sneezing, coughing, breathing difficulties, eye pain, repeated flashes, inflammation of the eyelids and in some cases temporary blindness. The cause of these effects is the gas load CS, CN or CR. These side effects vary in intensity depending on the nature of the compound. Symptoms from the use of CS gas, generally installed after 20-60 seconds after exposure and disappears after 30 minutes. These grenades are used for physical incapacitation of the opponent and temporary removal from the fight. Combining the two

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existing types of grenades: the flash-bang hand grenade and tears hand grenade, aims to achieve less lethal effects on man in military applications, the armed forces, the restoring public order forces.

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