

DEF GREN M50BG, M51BG & M63BG  
AND  
DEF GREN RIFLE

1. **DESCRIPTION.**

- a. Material. The grenades are cast iron with steel base plugs. The fuzes and adapter are aluminum. The safety levers, safety pins, and pullings are steel.
- b. Weight. The fuzed grenade weighs approximately 621 grams (1.4 pounds). With the rifle adapter it weighs approximately 800 grams (1.8 pounds).

2. **HAZARDOUS COMPONENTS.**

The grenade contains a TNT/potassium nitrate main charge weighing 50 grams (1.8 ounces). The fuzes contain a percussion primer, a relay, and a delay of unknown compositions and weights. The M48BG, M50BG, and M60BG fuzes also have a lead azide/RDX detonator of unknown weight; the M1BGA2 and M4BG fuzes have a lead azide/lead styphnate/RDX detonator of unknown weight.

3. **FUNCTIONING.**

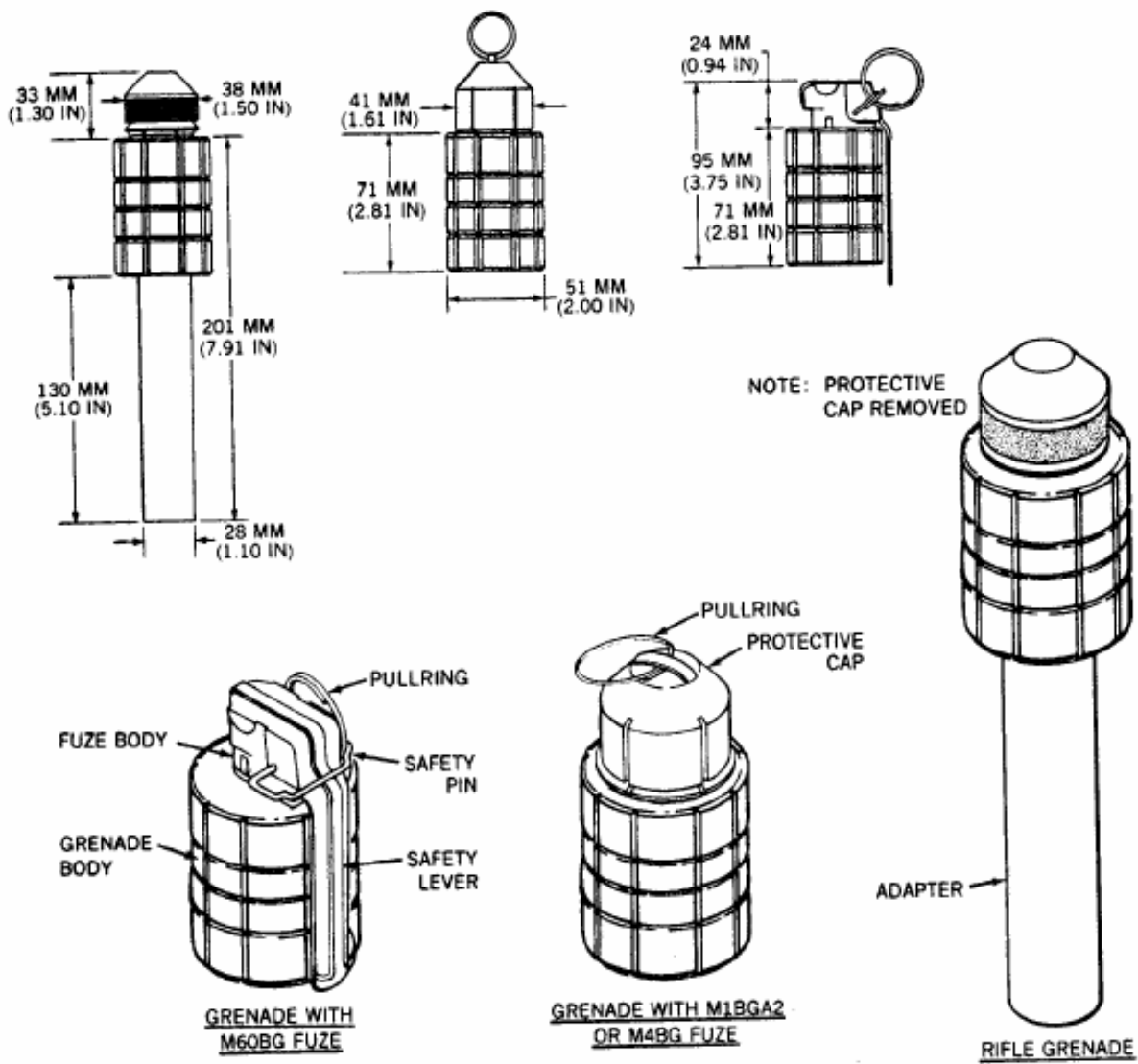
- a. M48BG, M50BG, and M60BG Fuzes.

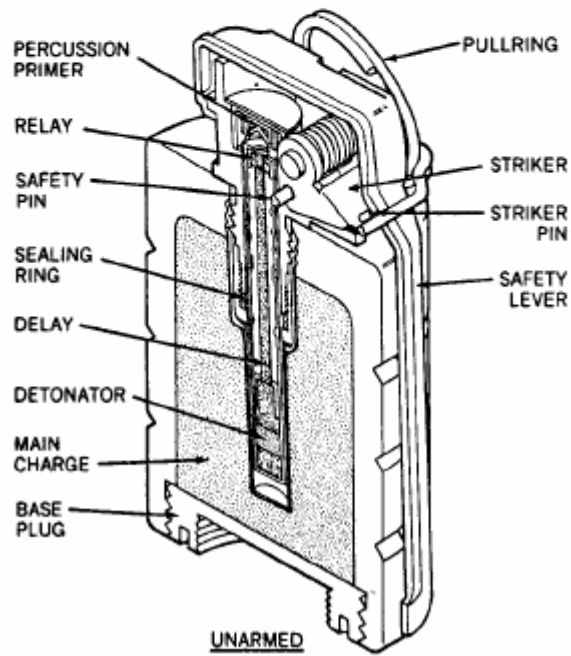
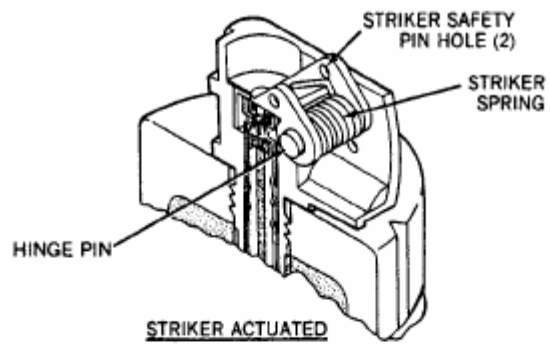
Prior to throwing the grenade, the pulling and the safety pin (figure 2) are removed. When the grenade is thrown, the safety lever is released and is forced away from the grenade by the striker spring. The striker continues to pivot until the striker pin strikes the percussion primer, initiating the explosive train. After a 4- to 5-second delay the grenade detonates.

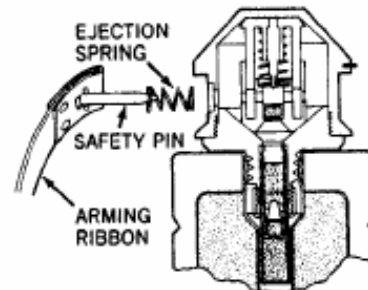
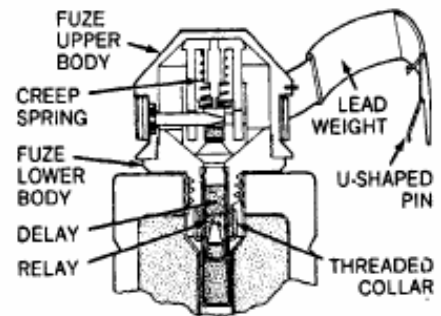
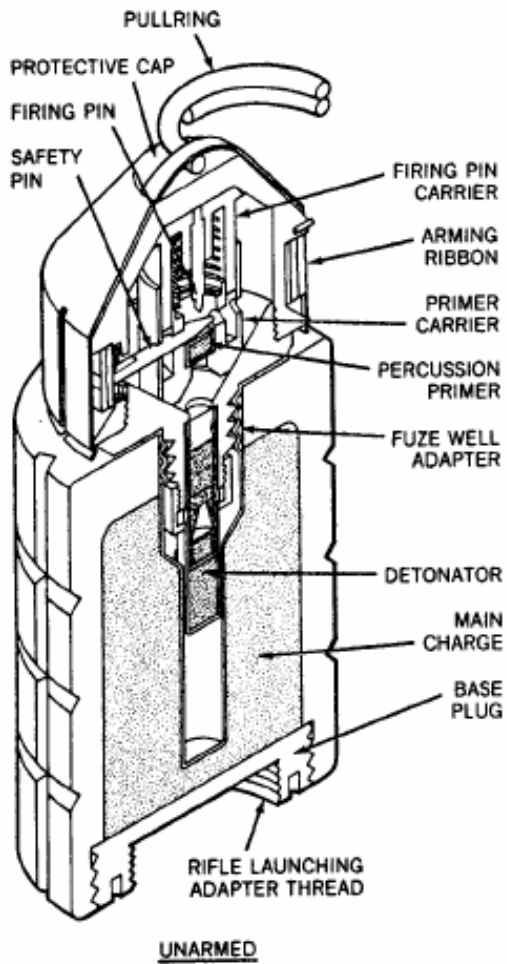
- b. M1BGA2 and M4BG Fuzes.

Prior to throwing or projecting the grenade, the pulling and protective cap (figure 3) are removed. The U-shaped pin on the arming ribbon is removed from the fuze upper body when the grenade is thrown or projected. The lead weight unfurls the arming ribbon and, in conjunction with the ejection spring, forces the safety pin from the fuze upper body. If the grenade hits fuze first, inertia drives the primer carrier forward, compressing the creep spring and forcing the percussion primer onto the firing pin. If the grenade lands base first, inertia drives the firing pin carrier rearward, compressing the creep spring and driving the firing pin into the percussion primer. If the grenade lands on its side, inertia forces the firing pin carrier and primer carrier sideways, camming the firing pin and percussion primer together. In any instance, the explosive train is initiated. After a 1-second delay, the grenade detonates.

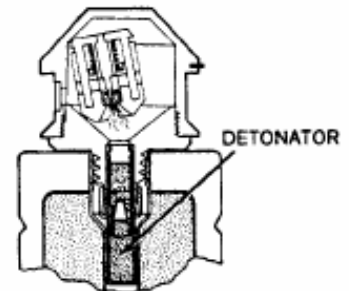
4. DRAWINGS.







EJECTION OF SAFETY PIN FULLY ARMING FUZE AND GRENADE



FUZE FIRED ON ANY LANDING POSITION OF GRENADE