

HAND GRENADE

A **grenade** is a small bomb filled with explosive or chemicals that may be thrown by hand or by the aid of a launcher. A grenade that may be thrown by hand is called a hand grenade, while the grenade that may be propelled by the blast of a rifle is called a rifle grenade. Grenades are designed to be carried and used by the individual combat soldier. Hence, this handy and powerful weapon is readily available to the individual rifleman for effective use against a wide variety of targets in such close combat situations against group of enemy personnel, weapons emplacements and armored vehicles during combat on built-up areas.

A rifleman needs no permission from higher headquarters nor from supporting and friendly units to use hand grenades. He also need not go through the time-consuming procedures of adjusting fire. Grenades are particularly useful at night, since they can be thrown without disclosing one's position. The thrower also need not aim them accurately as he would have to do with the rifle, in order to inflict casualties on the enemy.

A. CHARACTERISTICS:

1. **Short Range** – hand grenades have relatively short ranges since the distance that it can be propelled entirely depends upon the throwing ability of the individual and the weight of the grenade. An average rifleman can normally throw a hand grenade only from about 35 to 40 meters.

2. **Small Effective Casualty Radius (ECR)** – the Effective Casualty Radius is the radius of an area around the point of detonation of a bomb or explosive, within which at least 50% of the exposed personnel will become casualties. The ECR of a hand grenade is relatively smaller than that of the projectiles of heavier weapons, such as the mortar and recoilless rifle.

3. **Time Delayed Explosion** – all hand grenades have a time-delayed fuse element to permit safe throwing by giving the thrower enough time to take a covered position after releasing the grenade. Generally speaking, all casualty producing hand grenades have built-in 4 to 5 seconds time delay before they explode.

B. PARTS OF HAND GRENADE

1. **Body** – it is the container, which holds the explosive filler. In the case of high explosive grenades, it is that part which produce the casualty causing fragments or shrapnel upon explosion. A grenade metal body is hollow to contain the filler explosive charge and has an opening into which the fuse is inserted. It is color coded and appropriately marked to identify the type of grenade.

2. **Filler** – it is the substance, either explosive or slow burning chemicals with which the body of the grenade is filled. This filler charge could be TNT (Trinitrotoluene), composition B, black powder, white phosphorous or other chemical compounds.

3. **Fuse Assembly** – the mechanical and chemical device the causes the filler to detonate or burn, it is classified as either a detonating or an igniting fuse.

C. FUNCTIONING OF GRENADES

When the safety pin of the grenade is pulled out, the grenade is armed and it is only the safety lever which is held down firmly by the thrower's thumb, which keeps it from exploding. When the Marine throws the grenade, the safety lever is released and it flips free from the T-lug, allowing the spring-loader striker to hit the primer.

The primer when it explodes sets off the fuse delay element, which burns into the detonator or igniter. This chain reaction is ended by the explosion or the burning of the chemical filler in the grenade only. The entire fuse action requires only a few seconds and causes the time delay a grenade explodes.

D. PROPER WAY OF HOLDING THE GRENADE



To be able to effectively use hand grenades, individual Rifleman must be thoroughly trained on how to throw them. Familiarization on the safe and the proper way of throwing the grenade must be done before Rifleman are sent to combat with these handy and deadly weapons. To throw the grenade, you must hold it with the fingers of the throwing hand with the safety lever firmly held under the thumb and between the first and second joints. A left-handed thrower should grasp the grenade in the same manner as a right-handed thrower, but with the top of the fuse pointed downward. Then hook the forefinger of the other hand through the ring of the safety pin and prepare to pull. Do not pull the pin unless you are ready to throw the grenade.

E. GRENADE THROWING POSITIONS

The best way to throw the hand grenade is to throw it like a baseball, using throwing motions that are most natural for you. Give the grenade a little spin in flight by allowing it to roll off the tips of your fingers and releasing it with a snap of the wrist. Always follow through after you have released the grenade from your hand to improve your accuracy, to increase your throwing distance and reduce strain from your arm. Following are the throwing positions:

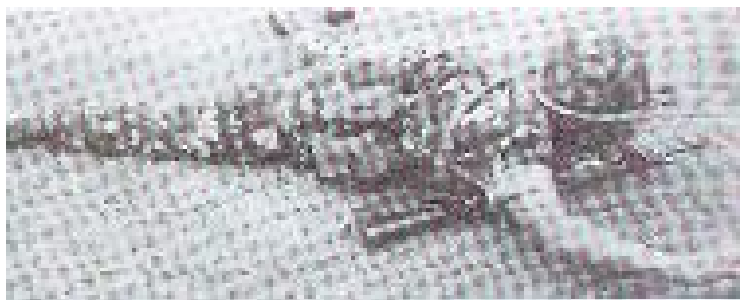
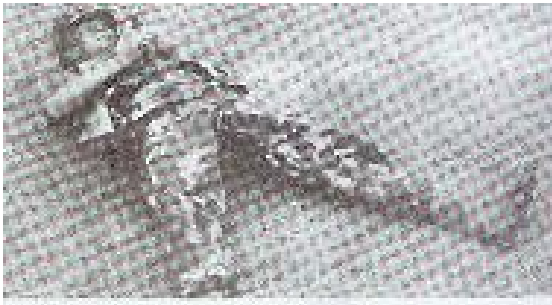


1. **Standing Throwing Position** – to throw the grenade in this position, face the target sideways with your body balanced evenly on your both feet. Hold the grenade in front of your body, chest high and remove the safety pin with a pulling, twisting motion. After throwing the grenade take an additional step forward and follow through by falling face down on the ground and absorbing the impact of your fall with your both arms. As much as possible keep your eyes on the target to observe where the grenade actually landed, as you fall to the prone position.



Follow Through from the Standing Throwing Position

2. **Prone Throwing Position** – the prone position is the hardest way of throwing the grenade and it limits both the range and accuracy of the thrower. This position is best used when the thrower is pinned down by enemy fire, with little or no cover and when the grenade cannot be thrown from any other position. To throw the grenade from the prone position, lie on your back, hold the grenade across your chest and pull the pin. Before throwing, hold on to any substantial object such as grasses or rocks on the ground with your free hand in order to improve both your range and accuracy. As soon as you have released the grenade, roll on to prone position on your stomach to complete the follow through.



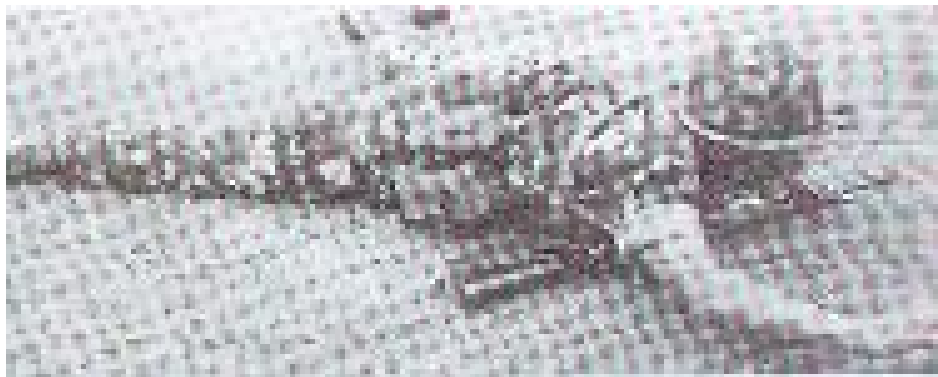
Following through from the Prone Throwing Position

3. **Kneeling from Prone Throwing Position** – while in the prone position, hold the grenade in front of your body and pull out the pin. Move your hands along both sides of your shoulders and raise your body quickly, pushing upward and to the rear. Do not rest the weight of your body on the grenade. Your left knee (if you are throwing right handed) should remain on the ground. Bend your right leg slightly so that your body can twist in order to get more power while you prepare to throw. As the grenade leaves your hand, follow through and then slowly fall to the ground, slightly breaking your fall with your arms.

4. **Kneeling Throwing Position** – face target sideways and kneel on the knee nearest to your target. After throwing the grenade, continue the throwing motion so that you will fall forward. Break your fall with your arms. Observe where the grenade actually landed so that you can make corrections when necessary in your next throw.



Preparing to throw from Kneeling Position



Following through from the Kneeling throwing Position