

GRENADES AND PYROTECHNIC SIGNALS

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PREFACE

The purpose of this manual is to orient soldiers to the functions and descriptions of hand grenades and ground pyrotechnic signals. It provides a reference for the identification and capabilities of various hand grenades and pyrotechnic signals. It also provides a guide for the proper handling and throwing of hand grenades, suggests methods and techniques for the tactical employment of hand grenades, and provides a guide for commanders conducting hand grenade training.

This manual provides information and guidance for operating, using, and training with hand grenades. It is intended for two user groups: (1) *training centers* responsible for introducing and training soldiers to a basic knowledge level and (2) *field units, officers, and noncommissioned officers* responsible for sustaining basic knowledge level skills and advancing soldier skills in the employment of the hand grenades on the battlefield.

The development of new hand grenades and improvement of existing hand grenades has resulted in many different grenade types within the US inventory. While only a limited number of grenade types are in production today for US Armed Forces, the majority of all hand grenades produced are used by either the armed forces of our allies or countries to which we occasionally provide military assistance. This manual addresses hand grenades common to the US Army. Obsolete hand grenades (the hand grenades less likely to be issued to US Army personnel) are addressed in Appendix E.

The proponent of this publication is Headquarters, TRADOC. Send comments and recommendations on DA Form 2028 directly to Commandant, US Army Infantry School, ATTN: ATSH-IN-S3, Fort Benning, GA 31905-5596; email LusanoH@benning.army.mil.

Unless otherwise stated, whenever the masculine gender is used, both men and women are included.

CHAPTER 1

TYPES OF HAND GRENADES

This chapter describes the various types of hand grenades, their components and mechanical functions, and examples of the grenades used by US forces.

1-1. DESCRIPTION

The hand grenade is a handheld, hand-armed, and hand-thrown weapon. US forces use colored smoke, white smoke, riot-control, special purpose, offensive, and practice hand grenades. Each grenade has a different capability that provides the soldier with a variety of options to successfully complete any given mission. Hand grenades give the soldier the ability to kill enemy soldiers and destroy enemy equipment. Historically, the most important hand grenade has been the fragmentation grenade, which is the soldier's personal indirect weapon system. Offensive grenades are much less lethal than fragmentation grenades on an enemy in the open, but they are very effective against an enemy within a confined space. Smoke and special purpose grenades can be used to signal, screen, control crowds or riots, start fires, or destroy equipment. The hand grenade is thrown by hand; therefore, the range is short and the casualty radius is small. The 4- to 5-second delay on the fuze allows the soldier to safely employ the grenade.

1-2. COMPONENTS

The hand grenade is made up of the following components:

- a. **Body.** The body contains filler and, in certain grenades, fragmentation.
- b. **Filler.** The filler is composed of a chemical or explosive substance, which determines the type of hand grenade for employment factors.
- c. **Fuze Assembly.** The fuze causes the grenade to ignite or explode by detonating the filler.

1-3. MECHANICAL FUNCTION

The following is the sequence for the M67 fragmentation hand grenade safety clip insertion and arming.

- a. **Insert the Safety Clip.** All hand grenades do not have safety clips (NSN 1330-00-183-5996). However, safety clips are available through Class V ammunition supply channels for some types of grenades. The safety clip is adaptable to the M26 and M67 series, the MK2, and the M69 practice grenade. The safety clip prevents the safety lever from springing loose even if the safety pin assembly is accidentally removed. The adjustment instructions are illustrated in Figure 1-1. The safety clip installation instructions are as follows:

- (1) Hold the fuzed grenade in the palm of the hand with the pull ring up.
- (2) Insert the small loop at the open end of the safety clip in the slot of the fuze body beneath the safety lever.
- (3) Press the clip across the safety lever until the closed end of the clip touches the safety lever and snaps securely into place around the safety lever.

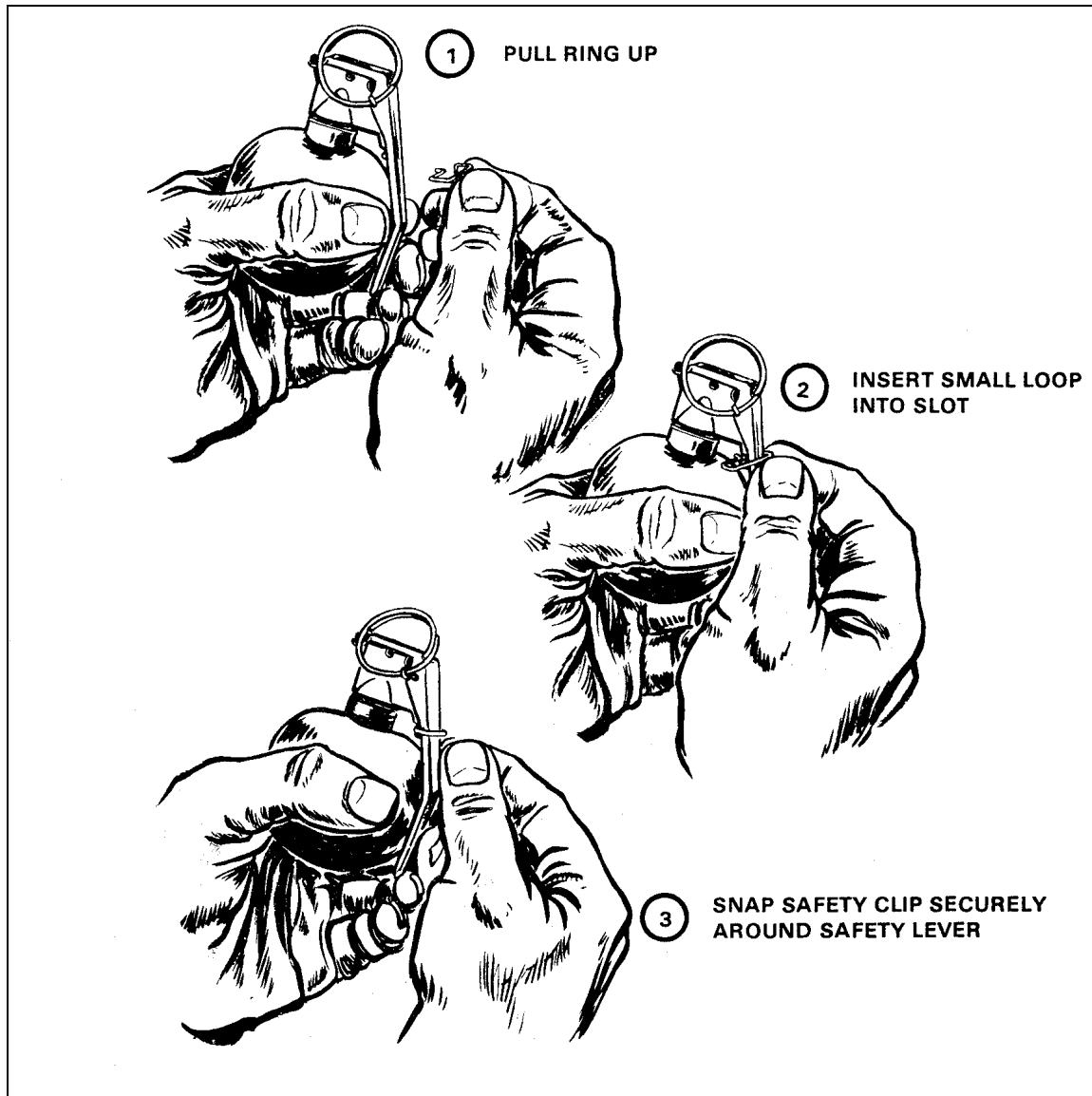


Figure 1-1. Safety clip insertion.

b. **Arming Sequence.** First remove the safety clip, then the safety pin, from the fuze by pulling the pull ring. Be sure to maintain pressure on the safety lever: it springs free once the safety clip and the safety pin assembly are removed.

c. **Release Pressure on Lever.** Once the grenade is thrown, the pressure on the safety lever is released, and the striker is forced to rotate on its axis by the striker spring, throwing the safety lever off. The striker then detonates the primer, and the primer explodes and ignites the delay element. The delay element burns for the prescribed amount of time then activates either the detonator or the igniter. The detonator or igniter acts to either explode or burn the filler substance (Figure 1-2).