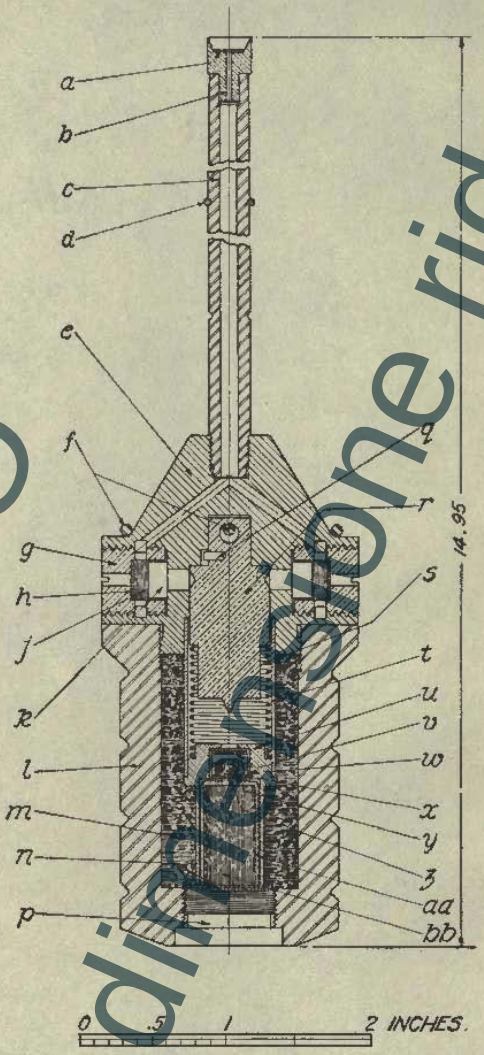
BABBITT RIFLE GRENADE.



GRENADES.

The rifle grenade adopted by the Ordnance Department is that known as the Babbitt rifle grenade, and is illustrated in Plate I of this pamphlet. The rifle grenade is intended to be fired from a service magazine rifle, model of 1903, by use of a specially loaded blank cartridge.

The hand grenade has been developed simultaneously with the rifle grenade and the type adopted by the department is illustrated in Plate II of this pamphlet. This grenade is thrown by hand in much the same manner as a stone is thrown from a sling. These grenades are high explosive missiles and should be used at short ranges from behind cover.

Rifle and hand grenades are packed in boxes containing 32 each.

THE ACTION OF THE RIFLE GRENADE.

The construction of the rifle grenade and the nomenclature of its component parts are indicated in Plate I.

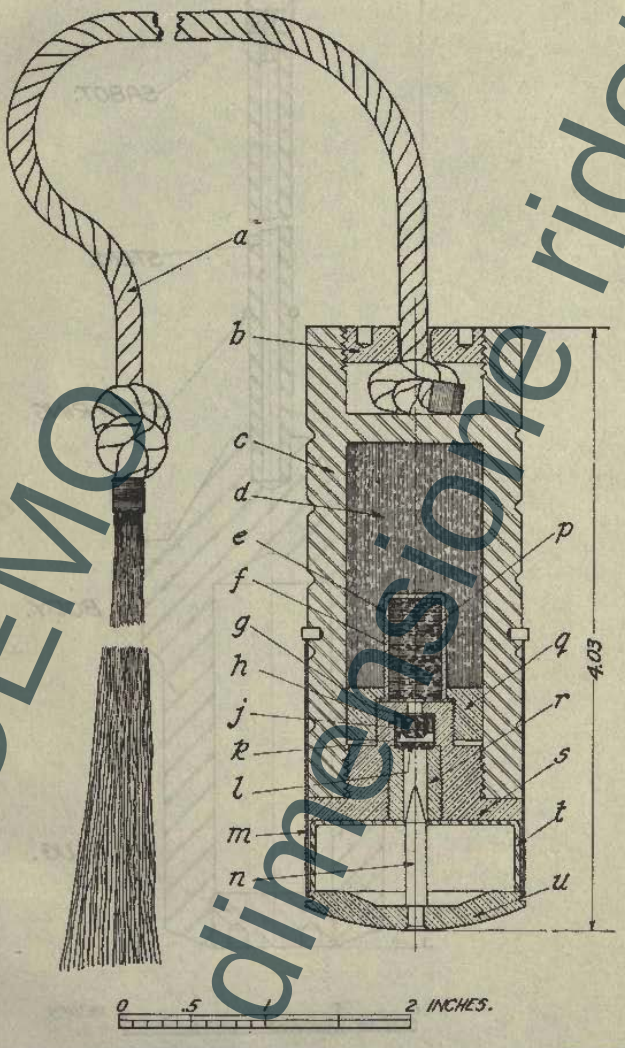
(PLATE I.)

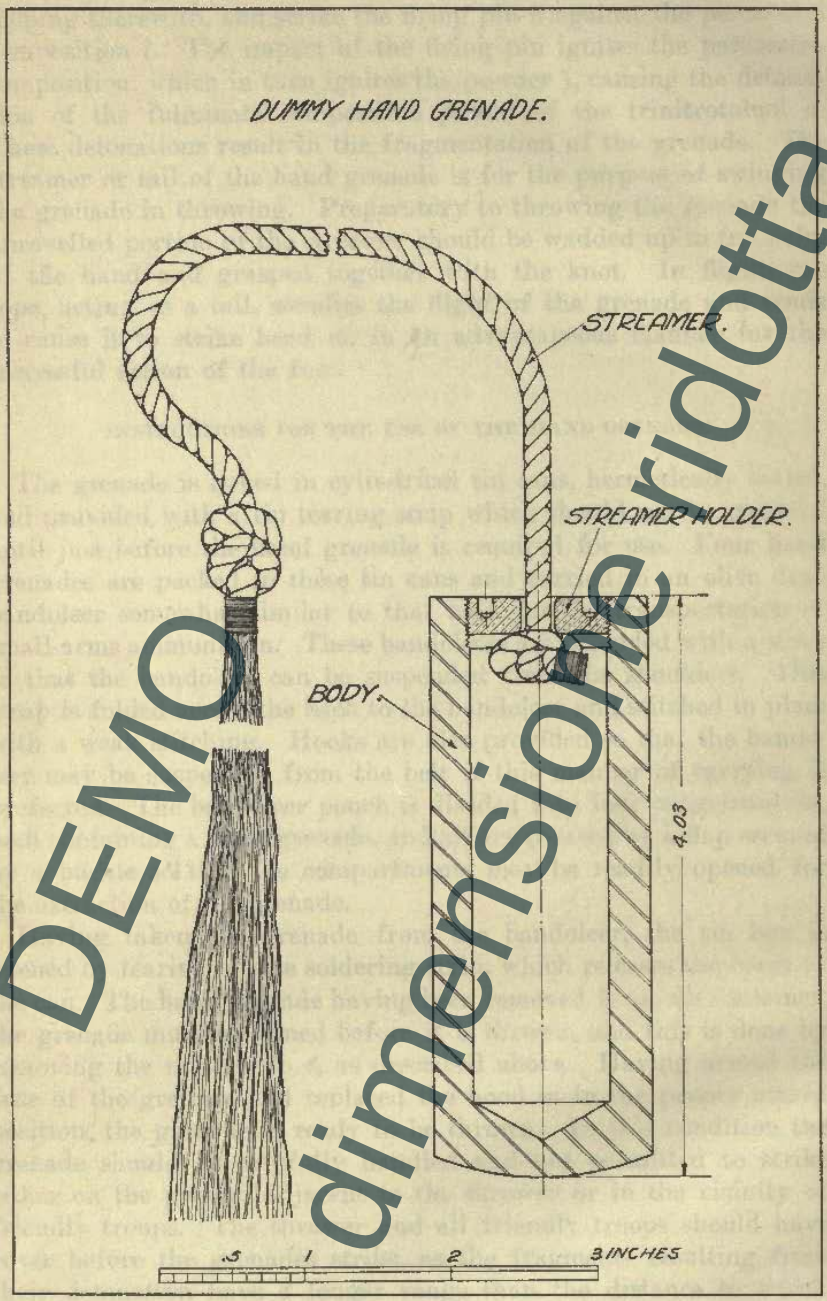
NOMENCLATURE.

a. Paper disk.
b. Sabot.
c. Stem.
d. Stem ring.
e. Closing screw.
f. Safety wire.
g. Safety pellet screw.
h. Paper disk.
j. Safety pellet.
k. Safety pin.
l. Body.
m. Trinitrotoluol.
n. Detonating cup filling disk.
p. Plug.
q. Plunger locking pin.
r. Plunger.
s. Plunger restraining spring.
t. Casing.
u. Primer holder.
v. Percussion composition.
w. Primer covering.
x. Primer housing.
y. Primer charge.
z. Primer closing disk.
aa. Detonator cup.
bb. Detonating compound.

The grenade is designed to be fired at a constant angle of elevation, namely 45°, except as noted below for ranges under 50 yards. The range attained is dependent upon the length of the stem inserted in the bore of the rifle. Tests have shown that within considerable limits the range is but little affected by small changes in the angle of elevation, near 45°, while a change in the length of inserted stem gives an appreciable change in the range.

HAND GRENADE.





this length may be decreased by adding another knot. The manner of throwing the grenade is dependent upon the free space available for swinging it. When the thrower has ample space behind a parapet, it is best to swing it around the head as with a sling, both for accuracy and safety. Untrained men will naturally swing the grenade in a vertical plane. The tests at the Sandy Hook Proving Ground indicate that this method is accompanied by considerable danger, as the thrower may strike the ground with the grenade in the act of whirling it or may release it so that its flight will be nearly vertical, causing the grenade to fall back near the thrower. The ranges that can be attained with this form of grenade are not great and vary with the strength and skill of the thrower. Prior to using service grenades, troops should be instructed in the use of dummy grenades. In assembling the hood *m*, after removing the safety cup *t*, *care should be taken not to attempt to force the hood too far upon the butt of the grenade body, or explosion may occur.* The rope of the grenade should also be examined to make sure it is in good condition and not liable to break while the grenade is being whirled.

In case a grenade which has been thrown and failed to detonate is recovered, it should be handled with the greatest care. Such grenades can be rendered safe for transportation by cautiously withdrawing the hood *m* from the grenade body, replacing the safety cup *t* in the hood, and then reassembling the hood to the grenade body. Or in case it be desired to throw the grenade a second time, this may be accomplished by drawing back the hood *m* until it will have its normal stroke upon impact and then throwing in the usual manner. However, if practicable, a grenade which has failed should be thrown into deep water from which its recovery is improbable, or should be buried in the ground.

The weight of the bandoleer packed with four containers and hand grenades is 6 pounds, and the weight of one hand grenade complete is 1 pound 5 ounces. The weight of the tin container is 1.92 ounces, and the weight of the bandoleer is 4.32 ounces.

DUMMY HAND GRENADES.

Dummy hand grenades are issued for instruction purposes and for practice in throwing grenades. These dummies are similar in weight and form to the live grenade, except that the body of the grenade is made of bronze instead of cast iron or steel and not grooved, but smooth upon its exterior surface so as to distinguish it from the live grenade, which is provided with grooves. The dummy hand grenade is also marked with the word "DUMMY." The cords attached to the dummy grenades will, with continued use, become worn and for