

(Extracts from a German Document.)

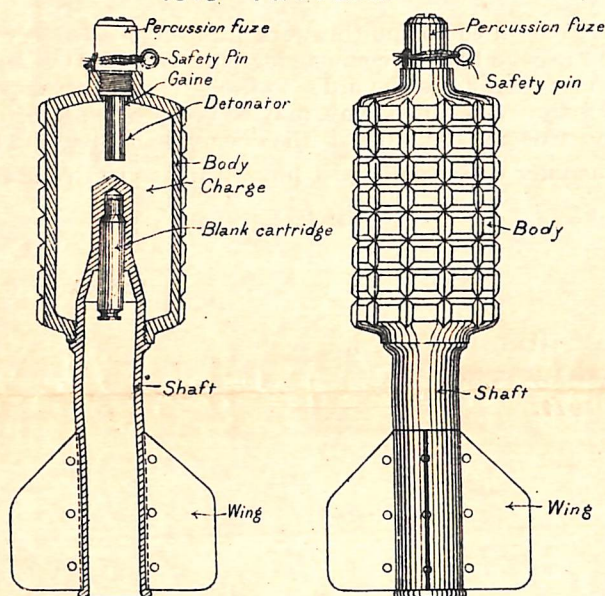
GERMAN INSTRUCTIONS FOR THE EMPLOYMENT OF "GRANATENWERFER" OR STICK BOMB-THROWERS.

Note by General Staff (Intelligence).

The "Granatenwerfer" or stick bomb-thrower is considered by the Germans to be a very valuable weapon for trench warfare, and captured documents show that it is intended to organize a "Granatenwerfer" detachment in every infantry regiment, each equipped with twelve of these weapons.

The stick bomb ("Wurfgrate 1915") thrown by these weapons is illustrated below; it contains $\frac{1}{2}$ lb. of high explosive and can be used at ranges between 66 and 328 yards.*

GERMAN "STICK" BOMB,
1915 PATTERN.



SCALE APPROXIMATELY $\frac{5}{16}$.

In view of the above, the following extracts from the instructions issued by the German Sixth Army for the employment of "Granatenwerfer" are of considerable interest.

EMPLOYMENT OF "GRANATENWERFER."

19th Oct., 1916.

1. The tasks assigned to the "stick" bomb-thrower vary according as high angle or flat trajectory fire is employed. Flat trajectory fire is employed for the destruction of light cover, such as sandbag revetments and loophole plates; high angle fire against targets behind cover. Normally the latter is employed, as flat trajectory fire is not sufficiently accurate and should be left preferably to trench guns.

2. The personnel of a "stick" bomb-thrower consists of the following:—

1 N.C.O. in charge.

A No. 1, who sights and works the bomb-thrower.

A No. 2, who sees to the ammunition supply.

3. Fire for effect is invariably preceded by registration. This must not be protracted, otherwise the enemy is able to seek cover or has time to vacate that portion of the trench which is under fire. The essential point is that the range first ordered should agree as nearly as possible with the actual range. By constant practice those in charge of batteries and bomb-throwers, as well as the Nos. 1, must acquire the knack of judging distances up to 330 yards.

* The maximum range is incorrectly given as 208 yards in "Summary of Recent Information regarding the German Army and its Methods" (S.S. 537).

4. The following methods of fire are employed:—

(a) **Independent fire.**—For flat trajectory fire against light cover.

(b) **Salvoes.**—For high angle fire for effect, when carried out by a battery of bomb-throwers against targets behind cover.

(c) **Barrage fire.**—Rapid high angle fire at ranges suitable for barrage purposes.

5. The factor of surprise largely contributes to the success of fire for effect, including moral effect.

6. The most advantageous target is usually the enemy's infantry in a trench, to engage which effectively, and more especially to prevent any movement to a flank, a wide front must be bombed simultaneously. Hence "stick" bomb-throwers will be employed normally in batteries.

7. The most convenient number of bomb-throwers to group in a battery is four. It is advisable not to exceed four, otherwise the commander can no longer maintain control by means of verbal orders, and, before firing a salvo, it takes too long to exercise a very necessary check on each bomb-thrower.

8. In each company sector, at least eight battery positions must be prepared for batteries of bomb-throwers. These weapons must be spaced at intervals of about 20 yards, so that two of them cannot be put out of action by one round from the enemy.

9. The battery commander will instruct the N.C.O.s in charge of bomb-throwers as regards their targets, giving the ranges and necessary corrections for wind and drift, and then give the order to prepare to fire.

Simultaneous fire from all the bomb-throwers grouped as a battery is the decisive factor of fire effect. To insure this, the battery commander makes his N.C.O.s report when their weapons are ready to fire, and only then gives the order to fire. This order, depending on the direction of the wind and the proximity of the enemy, may be given by word of command, by whistle or by a sign, but there must be no possibility of the enemy being alarmed before the salvo is fired.

The battery commander will usually post himself in the centre of his battery.

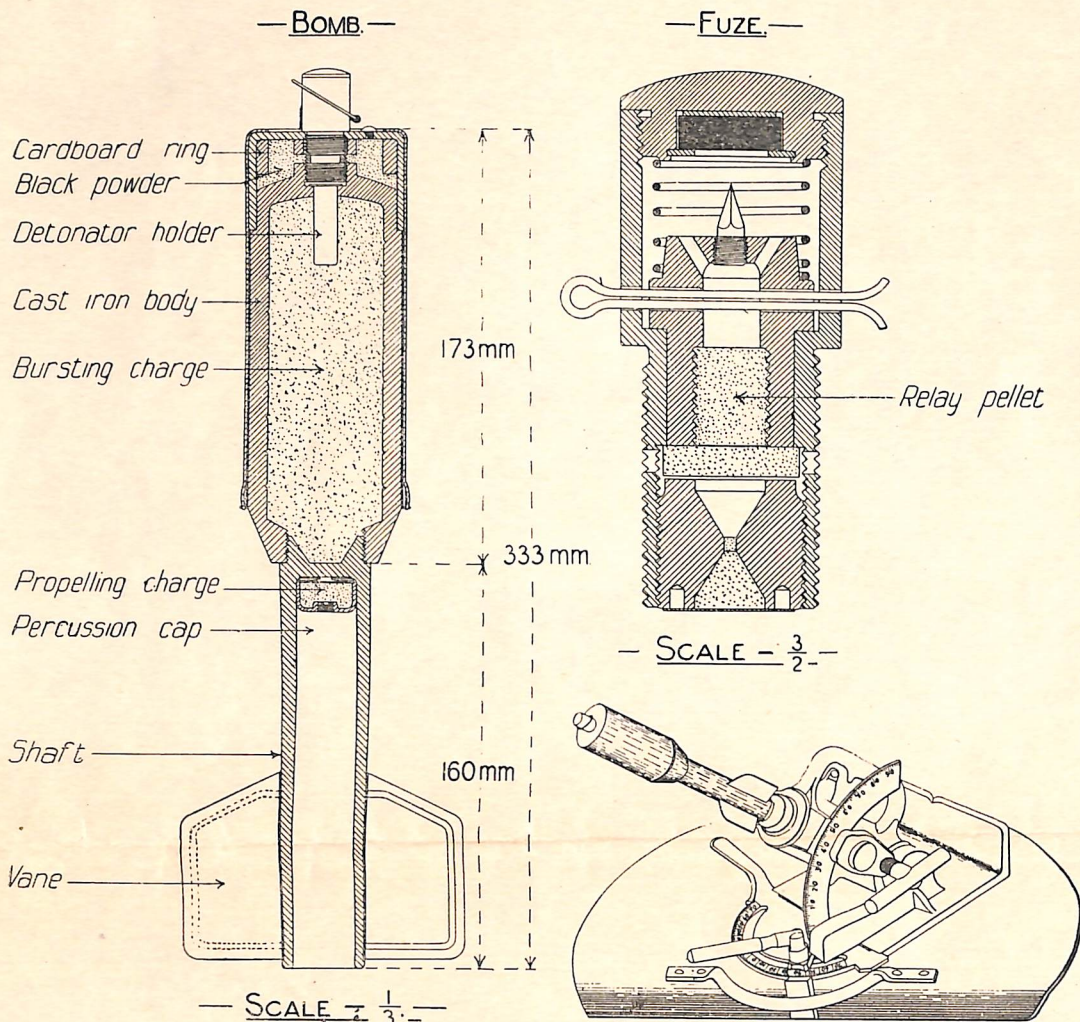
Issued by:—

GENERAL STAFF (INTELLIGENCE),

GENERAL HEADQUARTERS.

1st February, 1917.

NEW TYPE OF BOMB FOR "GRANATWERFER" (or STICK BOMB-THROWER).



The drawings show an improved pattern of stick bomb (*Wurfgrante*) for the stick bomb-thrower or *Granatwerfer*.

The bomb is designed to burst above the ground when it strikes, instead of merely making a small crater. In appearance it differs from the original pattern (described in S.S. 546, "The 1916 Pattern Bomb-Thrower") in having the serrations inside the body instead of outside; the exterior is smooth.

The action is as follows:—Over the head of the cast-iron body of the bomb is fitted a steel case closed at one end, at the bottom of which is a chamber containing a charge of black powder. The case is held in place by the fuze. When the bomb strikes the ground, the fuze is set in action and transmits ignition both to the charge of black powder in the steel case and to the detonator in the bomb; the former fires first, and by its effect, the steel case acting as a mortar, the bomb is projected upwards from the ground and bursts in the air.

The propelling charge of the new bomb is contained in a flat tin case instead of a blank cartridge as in the original pattern, thus leaving more room for the bursting charge.

The following is a comparison between the new and ordinary pattern bombs:—

				New Pattern.	Ordinary Pattern.
Total weight	...	...	...	5½ lbs.	4 lbs.
Weight of bursting charge	...	...	...	7 ozs.	8 ozs.
Total length with fuze	...	...	...	14.1 inches.	10.8 inches.
Exterior diameter of body	...	...	...	2.6 inches.	2.7 inches.
Maximum range	...	...	...	275 yards (approx.)	328 yards.

GENERAL STAFF (INTELLIGENCE),
GENERAL HEADQUARTERS.

11th April, 1918.