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## NOTES ON GERMAN GAS SHELLS.

### 1. Nature of Armament.

German gas shells are used with:—

- Heavy Field Howitzers (15 cm.).
- Light Field Howitzers (10.5 cm.).
- Field Guns (7.7 cm.).
- Various trench mortars.

The shells contain a small bursting charge.

### 2. Nature of Gas.

The gases are of 2 classes:—

1. *Lachrymatory*, which primarily attack the eyes.
2. *Asphyxiating*, which primarily attack the lungs.

### 3. Lachrymatory Shells.

The gas formed by these shells is usually very heavy and hangs low over the ground like a mist. It lodges in woods, hollows, trenches, shelters and cellars. Its irritant effect can sometimes be felt for several hours.

The shell is grey, with a black head and a black "T" painted on it.

### 4. Asphyxiating Shells.

The gas formed by these shells is a strong irritant but more volatile and less dense than that of lachrymatory shells. Hence it dissipates rapidly.

The shell is grey\*, with a yellow head and a black "K" painted on it.

### 5. Employment of Gas Shells.

Two kinds of gas shells are employed for different purposes, viz.:—

- Lachrymatory*, against a position which it is not desired to occupy but which is to be denied to the enemy;
- Asphyxiating*, to drive the enemy from a position with a view to its capture.

### 6. Tactical methods employed by the Germans.

The following is the normal process of attack with asphyxiating shells as laid down by the German General Staff:—

- (a) Fire is opened on the ground 450 yards behind the objective;
- (b) The range is gradually decreased by 30 yards at a time until the objective is reached;
- (c) Continuous fire is maintained on the objective for 20 to 30 minutes;
- (d) The range is gradually increased and patrols sent forward;
- (e) If the patrols are not fired on, the infantry advances to the position;
- (f) If the patrols are fired on, the whole process is repeated.

### 7. Barrage by Gas Shells.

The following is the procedure:—

The area is attacked in successive rectangles about 60 yards wide and 30 yards deep, the minimum total depth of the barrage being 220 yards.

### 8. Conditions suitable for an attack with Gas Shells.

1. Wind not more than 4½ miles per hour.
2. Fog or gentle rain.
3. Objective in woods, bushes or standing corn (because the gas hangs in these).
4. Descending air currents, generally by night or in the early morning.

### 9. Conditions unsuitable for an attack with Gas Shells.

1. Heavy rain.
2. High wind.
3. The sun shining but the barometer low.

It is to be remembered that the P.H. and P.H.G. Helmets and Box-Respirators give complete protection against all poisonous shell gases.

Gas shells can often be recognised by the small detonation. Therefore, shells with small detonation should be treated with respect, and a helmet or respirator put on at the first indication of gas.

\* 7.7 cm. and 10.5 cm. gas shells found recently are painted blue with yellow head.

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