

The experience of recent gas attacks has shown that in order to reduce gas casualties to a minimum, the utmost care must be taken—

- (a) In inspection of helmets.
- (b) In training all ranks in quick adjustment of the tube helmet under all conditions.
- (c) To ensure that every man, whether in front or support lines, shall be given immediate warning.

Every officer is responsible that the men under his command are properly instructed in defensive measures against gas attacks, and that standing orders on the subject are thoroughly understood.

Method of making a gas attack.

A cloud gas attack cannot take place unless the wind is in the right quarter to blow the gas in the desired direction. The gas is carried up to the trenches compressed in steel cylinders. These are dug in at the bottom of the trench and connected with pipes leading out over the parapet. When the valves of the cylinder are opened, the gas escapes with a loud hissing sound, it mixes with the air and is carried by the wind towards the opposing trenches, spreading out as it goes forward. A continuous wave of gas and air is thus formed, the colour of which may vary—

- (a) Because of the weather conditions. On a dry day the gas may appear greenish in colour while in damp weather it forms a white cloud.
- (b) Because it may be mixed with smoke of any colour.

The speed with which the gas cloud approaches depends entirely on the wind velocity. Gas attacks have been made with wind velocities varying from 3 to 15 miles per hour, i.e., from $1\frac{1}{2}$ to $7\frac{1}{2}$ yards per second. In a 9-mile wind the gas would reach trenches 100 yards distant in 20 seconds. The rapidity with which the gas cloud travels makes it essential that troops should be trained in adjusting their helmets as rapidly as possible, and their warning of an approaching gas attack should be given without any delay. The earliest warning of a gas attack is given—

- (i) By the noise of the gas escaping from the cylinders.
- (ii) By the appearance of a cloud of any colour over the enemy's trenches. If the attack takes place at night, the cloud will not be visible from a distance.
- (iii) By the smell of the gas in listening posts.