



SUPPLY
LINE

Artifact Backgrounder

Gas Alarm Rattle



DEFINITION

The **gas alarm rattle** is a hand-operated ratchet device that makes a loud clacking sound when turned rapidly. Soldiers of the British Empire forces used rattles in some instances as alarms to warn others of the presence of chemical weapons.

DID YOU KNOW?

The **gas alarm rattle** was made primarily of wood. These alarms sometimes went missing in the trenches, where dry kindling for cooking fires was often in short supply. It seems that, in addition to serving as an anti-gas alarm, at least a few **gas alarm rattles** also provided convenient sources of fuel for soldiers who wanted a hot cup of tea or a fried egg.

HISTORICAL CONTEXT

The first use of poison gas during the First World War took place at the Second Battle of Ypres, Belgium, in 1915. Looking to break the stalemate of trench warfare, the German Army released large volumes of deadly chlorine gas.

DID YOU KNOW?

The **gas alarm rattle** was sometimes referred to as a “policeman’s rattle” because they were similar to models used by civilian police. Such rattles were also used after the war as noise-makers by football fans to cheer on their teams.

The wind carried the chlorine clouds across the positions of French, British and Canadian troops, none of whom were outfitted with anti-gas equipment. From 1915 onwards, both sides used deadly gases as weapons. While the early gas attacks had relied on compressed-air tanks, chemical agents such as chlorine gas, phosgene and mustard gas were later packed into artillery shells so that they could be detonated near specific targets.

Anti-gas respirators (or “gas masks”) provided reasonably good protection against gas, but they were only effective if the soldier was wearing one when first exposed to gas. British Empire forces experimented with a selection of alarm devices, including the **gas alarm rattle**.

EVOLUTION/DEVELOPMENT

British Empire troops used a variety of devices as anti-gas alarms throughout the war. Low-maintenance alarms could be improvised by converting empty large-calibre brass cartridge cases into bells or gongs, like dinner bells. These alarms were installed at regular intervals in the front trenches and sounded if a gas attack was suspected.

Installing bells, gongs, or air horns in the trenches was a relatively simple matter, but a way to spread the alarm was also required on roadways and temporary positions further to the rear. Air horns and bells were less practical in such instances, because they were not easily portable, and could not readily be sounded by troops on the march. As a temporary measure, soldiers might bang their bayonets on their steel helmets, but this was not ideal, as it involved removing the helmet and leaving the head exposed.

The **gas alarm rattle** offered a better solution, because it was lightweight, portable and had a simple, inexpensive design. There was some fear that sound of the **gas alarm rattle** might be mistaken for machine-gun fire and ignored. However, this was not the case, and the **gas alarm rattle** was a reasonably effective local alarm.

Soldiers were also trained to spread the word of a gas alarm verbally, tapping on the shoulder of the next soldier, and passing the news down the line. As the **gas alarm rattle** became more common, some, upon suspecting the presence of gas, would shout “rattles!” as they donned their respirators.

DID YOU KNOW?

In early 1916 a Canadian engineering officer was sent to find a small fog horn like those used in large sailing ships or

small lighthouses. These devices, while effective as gas alarms, required specialized maintenance.

VOCABULARY LIST

Artillery:

Weapons that use mechanical or explosive (chemical) energy to project munitions over distances ranging from hundreds of meters to dozens of kilometers. Generally speaking, any device that fires a projectile with a calibre (diameter) of 2 cm or greater is considered an artillery weapon.

British Empire forces:

In the context of the First World War period, this term refers to all military forces associated with the British Empire, including troops from colonies, self-governing nations (such as Canada or Australia), and various other territories under British influence or protection. Soldiers of many nationalities and ethnicities served with the British Empire forces, including English, Welsh, Scottish, Irish, Canadian, Australian, New Zealand, South African, Indian, Egyptian and Chinese personnel, as well as Aboriginal peoples from Canada, Australia, and New Zealand.

Chlorine gas:

A chemical weapon widely employed during the First World War in gaseous form. It affects the lung tissue, and can be deadly when inhaled in sufficient quantities. Lower doses cause extreme discomfort to the eyes, nose, throat and lungs.

Mustard gas:

A chemical weapon employed during the First World War in aerosol and liquid form. It caused serious burns to any exposed skin. If inhaled in aerosol form it could also cause burns to the lungs.

Phosgene:

A chemical weapon employed during the First World War in gaseous form. When inhaled, it attacks the surface of the lungs. It is several times more toxic than chlorine gas; unlike chlorine, its effects were often delayed by several hours.

Ratchet:

A mechanical device that spins in one direction only, usually by passing a toothed wheel or gear over a fixed notch.