

# Army Balloons: Factsheet 1



- ❖ Balloons were used by the Army for 'observation'. From a balloon, high up in the sky, soldiers could see their enemy and watch what they were doing.
- ❖ A balloon was first used for military observation by the French army in 1794. During the Battle of Fleurus, they used a balloon called *L'Entreprenant* to spy on their Austrian enemies.
- ❖ From 1878, the British Army began to use balloons. A section of the Royal Engineers undertook experiments and started to train soldiers in ballooning.
- ❖ The British Army's first aircraft was a balloon called *Pioneer*. It was made of varnished fabric and could hold 283 cubic metres of gas. It cost £71 to build.
- ❖ British Army balloons were normally flown at about 450 metres from the ground. From this height, in good weather, a soldier could see for 6 miles.



- ❖ The standard size balloon could lift two men. However, early balloon baskets only had space for one person sitting down, so one of the soldiers would often ride in the rigging.
- ❖ How much a soldier weighed affected whether they were selected for ballooning.
- ❖ Soldiers in the balloon talked to soldiers on the ground using a telephone. They dropped written messages down to them in weighted bags attached to the balloon cable.

- ❖ Army balloons were normally tethered (attached to the ground) by a cable. However, soldiers practiced 'free runs' so they would know what to do if their balloon ever came loose from its cable. This was not a popular part of their training.

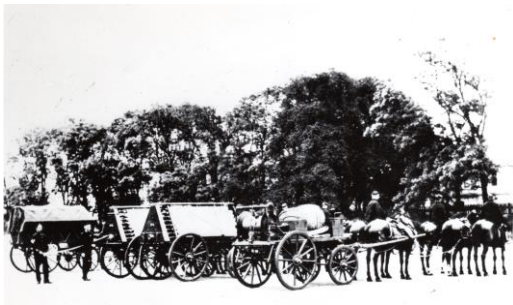
- ❖ The longest free run by an Army balloon took place in 1894 and covered a distance of 152 miles.
- ❖ One Army free run ended with the balloon landing on a lake. The passengers drank champagne and tucked into an "excellent" meat pie while waiting to be rescued by boat.



# Army Balloons: Factsheet 2



- ❖ Army balloons were filled with hydrogen. This gas is much lighter than air, but it's very flammable (catches fire easily) so the Royal Engineers had to be very careful when they used it.
- ❖ In high winds, balloon baskets would swing and sway, making the soldiers inside sick.
- ❖ From 1883, Army balloons were made of a substance called goldbeater's skin. This was made from ox intestines (guts). Goldbeater's skin was strong, light and could hold hydrogen but it was also very expensive - an average size balloon required the intestines from 74,000 oxen.
- ❖ The secret of how to make balloons from goldbeater's skin was held by the Weinling family. Anne Weinling and her three daughters worked for the British Army from 1883 until about 1922. They supervised other workers.



- ❖ Each balloon unit needed up to ten waggons. These were used to transport the balloon with its basket, tubes of hydrogen, a spare balloon, additional equipment and water. The waggons were normally pulled by horses but when the Army was serving in Africa, they used oxen, mules and camels instead.

- ❖ Army balloons were used for bombing, radio and weather experiments. In 1883, Captain Elsdale attached an automatic camera to some small balloons and successfully photographed a fort from the air.
- ❖ Ballooning soldiers were highly trained. They could fill a balloon with gas and get it airborne in just 20 minutes.
- ❖ Between 1885 and 1902 Army balloon units served on active operations in southern Africa, Sudan and China. During these wars, soldiers used balloons to observe the enemy, direct gunfire onto targets and send signals. They drew maps of what they could see for the soldiers on the ground.
- ❖ Balloons proved to the Army how useful and important flying machines could be.

