

THE ADVENT OF THE STEEL HELMET

The first thoughts of proper protection for the head in World War 1 came about in a purely fortuitous manner, when General Adrian of the French Army, noted that a soldier who had survived a head wound from a rifle bullet, explained his escape from death on the fact that he had carried his metal food bowl under his cloth cap. Therefore, following initial experiments in 1914, steel cap liners ('Casque Adrian') were issued to French troops in 1915, which led to the production of the characteristic World War 1 French helmet in 1916. Many of the other warring nations soon realised the value of effective head protection.

The disproportionate number of lethal head wounds, and the introduction into the French Army of the 'Adrian' helmet led the British to take similar steps, and the 'Inventions Committee' was tasked to undertake the job. They began by acquiring a number of 'Adrian' helmets and some steel skull caps in July 1915 and recommended the purchase of a number of 'Adrians' for sentry duty in front line trenches. Meanwhile, the War Office had also concluded that there was a need for steel helmets, but decided to design one from scratch as the 'Adrian' was deemed too weak and too complex for mass production.

The resulting British helmet was specifically meant to provide protection against shrapnel and 'falling objects'. The design of John L. Brodie was patented in 1915, this being the familiar steel 'bowl', providing good coverage from above, and ease of production, being pressed from a single sheet of steel. The first type 'A' was made of mild steel with a brim 1.5 – 2 inches wide, and had a slightly flattened dome. Production of the 'A' had only been under way for a few weeks when, in October 1915, the specification was changed. Henceforth, it was to be made of hardened steel of the 'Hadfield' variety and was to be strong enough to protect against a shrapnel ball travelling at 750 ft/sec. This 'B' type helmet was a lot tougher than the 'A', but was not robust enough to stop a close/medium range hit from a rifle or machine-gun round and was never intended to be so. Apart from the metallurgical differences, the 'B' had a narrower brim, and the dome was no longer flattened. 'A's and 'B's were produced in parallel whilst production problems with the 'B's were fixed.

The first helmets began to arrive on the Western Front in September 1915, at first used as 'Trench Stores', kept at the line and used by each unit as they took turns in that sector. On 9th December 1915, a question was asked in Parliament regarding this use of steel helmets, to which the Under Secretary of State for War intimated that he knew of no reason why the troops should not have steel helmets issued specifically to them as an integral part of their equipment. Rumours went round that some British generals thought they looked stupid and would make the men go 'soft', but the introduction of steel helmets led to an immediate reduction in the number of deaths.

Obtusely, statistics show that following the general issue of steel helmets, the incidence of head wounds actually increased. It is sometimes incorrectly assumed that this was because the newly steel-helmeted troops were recklessly looking over their parapets and being picked off by snipers, not realising that their 'battle bowlers' were not bullet proof and were only intended to protect the head from shrapnel and the aforementioned 'falling objects'. This was not the case, of course, and the increase in the number of head wounds was in fact matched by a decrease in the number of deaths due to head wounds. In other words, men were now surviving head trauma who would otherwise have been killed if it were not for the wearing of steel helmets.

By early 1916, 250,000 helmets had been issued. Soldiers criticised the 'B' helmet, finding it too shallow, too reflective, and the edge of the rim too sharp. In May 1916 the Mark 1 helmet was developed, with a 2-part liner, thin mild steel 'folded' rim, and painted khaki, the texture roughened with a covering of sawdust or sand whilst the paint was wet, which gave it an excellent matt surface. With a few minor modifications, the Mark 1 saw the war out, some being exported to the USA and also issued to the home front. Units soon began painting divisional signs etc onto their helmets. Some

drilled holes to affix badges, but this was outlawed because it weakened the structure of the helmet. With minor changes, this type of helmet was worn by British and Commonwealth troops in World War 2