

Gamages Aviation Helmet, 1910

The First Purpose Designed Aviators' Helmet.

The role of Samuel Cody & its Football Helmet Origins



Figure 1. **Top,** The First Purpose Designed Aviators Helmet, 'Gamages Aviation Helmet' was being advertised and photographed by November 1910. **Below** The other earliest helmets, **left to right** - 'Roolds, Casque D'Aviateur' 1911 or 12; 'The Warren Safety Helmet' 1912; and the 'M. 13 sturzhelm' 1913. These three were adopted by governments and used in WWI. Gamage's helmet on the other hand is only recorded by a few pre-War photographs and a handful of early advertisements; it seems to have become obsolete by the end of 1913. (Top. *Scientific America*, Sep. 14, 1912.)

From the Wright brothers in 1903 the first aviators went bare headed or wore contemporary flat caps, usually turned backwards. During his cross Channel flight in 1909 Bleriot wore a tight fitting soft cap with combined neck and ear covers and under-chin wraps, the type became popularly known as the 'Bleriot helmet', but it was actually a motoring cap style advertised since at least 1904. In America another existing item of headwear put to use were early America football helmets, with several types being used by individuals in the 1900s.



Figure 2. Pre-1910 non-specialist flying headwear. **Left to right**, De-rigueur, a reversed flat cap; Julia Clark in a fashionable fur motoring hat; Bleriot in a soft close-fitting 'Varsity' style motoring cap; and Eugene Ely in a soft 'flat top' football helmet.

By 1910 however it was realized that a purposely designed aviation crash helmet was probably needed to make the sport safer; and with the cadre of aviators rapidly increasing it was recognized by some that a new market for specialist aviation equipment was emerging.

GAMAGES
AVIATION HELMET
 Padded Leather Helmets with buffers and ear guards, ample ventilation,
PRICE 40/-
 Fitted with Solid Steel Crown,
PRICE 45/-
The only safe Cap for AVIATION.
 Similar model with hard leather crown and buffers, 25/-
Read what a Wearer says:
 "FAIR HAVEN,"
 EWELL ROAD, SURREY.
 November 20th, 1910.
 Messrs. A. W. GAMAGE, LTD., HOLBORN, E.C.
 DEAR SIRS,—I certainly have no objection to your using my letter as a testimonial as to the efficiency of your "Flying Helmet," if you desire to do so.
The Helmet undoubtedly saved my life.
 Yours faithfully,
 (Signed) CHARLES JOBLING.

A. W. GAMAGE LTD. BENEFINK & CO.
 HOLBORN. CHEAPSIDE.

Figure 3. Gamages advertisement from 3rd December 1910, containing an endorsement indicating the helmet was in use earlier that year. At right an image of one in use 23rd November 1910. (Left - Aviationancestry.com. Right - Harpers Weekly, Dec. 1910)



Figure 4.Left, a detailed image of Samuel Franklin Cody wearing a 1910 Cody/Gamages Aviation Helmet in 1912 and at **right** Andrea Grapparon in 1913 wearing one which has had the buffer removed and the front of the inverted 'L' shaped earflap cut off. It can be seen that the large buffer was held on by short straps and snap fasteners and as such was probably always meant to be removable. The padding throughout was simply half inch or thicker compact white felt attached to the inside of the cap, sweatband, earflaps and buffers, with a double felt buffer at the front. The padded earflap extended forward to protect the temple region. As mentioned in the advertising there were two models one with the cap made of steel and a cheaper version in hard leather. The similarity of the basic helmet with its buffer removed to contemporary American football helmets is striking.

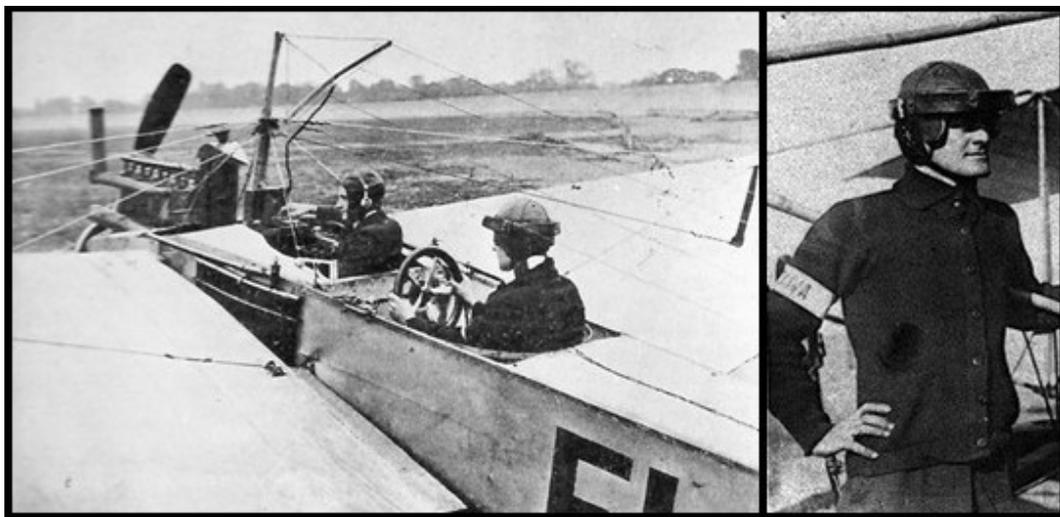


Figure 5.Left, Pioneering two-way Morse code experimentation at Brooklands May 1912. The pilot E.V.B. Fisher is wearing a Gamages Aviation Helmet. **Right**, Engle Hoff at the Dominguez Hills Air Meet, USA in 1912. (Left, Copyright Phil Jarrett, from About Brooklands Wireless website. Right, University of California dig. lib.)

Without the buffers the Gamages Aviation Helmet was very similar to the 1900-1920 Reach No.0 American football helmet. The No.0 first appeared in 1900 as an improvement on the earlier open-lattice football 'head harnesses' and simple leather 'rain cap' styles used in the late 1800s. The No.0 model was very popular and was produced until 1920.



Figure 6. Left,Famous football player Jim Thorpe wearing a Reach No.0 helmet or similar in 1900. **Right,** a Harley Davidson motorcyclist wearing a Reach No.0. Photographs of the Reach No.0 being used by motorcyclists in the first two decades of the 1900s are actually more common than images of it being used by football players.

Gamages was a large, popular department store located in Holborn, Central London. It would appear, however that their helmet was a modification of an American Football helmet. Why was a company in London producing a helmet apparently based on an American football helmet?

Samuel Franklin Cody, the first person to make a heavier than air powered flight in Britain (16 Oct. 1908) was an American who had become naturalized in Britain. He was an extremely well know personality, a showman, inventor, aviator and something of self-publicist. From 1906 he worked at the 'Army Balloon Factory' (later the Royal Aircraft Establishment) at Farnborough, southwest of London. At first as 'Chief Instructor of Kiting' later as a designer of airship components. After April 1909 he was no longer working for the military, but still using facilities around Farnborough.

Around this time Cody designed his pioneering aviation helmet and approached Gamages to market it (Rood, 2014). Being an internationally famous showman and the highest profile aviator of the time, Gamages readily agreed to the proposal. There are numerous images of Cody wearing (promoting) versions of the helmet in the years before his death in 1913. Apparently he wanted to call it the '*Farnborough*'(Rood, 2014), but this name is absent from the readily available literature and it usually appears as the 'Gamages Aviation Helmet'.

Cody had left the USA in 1890 so could not have had firsthand knowledge of the Reach No.0 type football helmet. However, Cody frequented nearby Brooklands due to the regular aviation events taking place there. Brooklands was not only one of the main centers for civil aviation in Britain, but was primarily a motor racing venue. Visiting American motorcyclists may have worn Reach No.0 football helmets, or he may have seen them in American motorcycle magazines; either way Cody apparently choose the general layout of the Reach No.0 as the basis for his new helmet.



Figure 7. Numerous images of US motorcyclists from the period show individuals and teams (Harley Davidson and Indian, amongst others) wearing the Reach No.0 as a crash helmet.

It is generally considered that motorcycles came of age in 1901 '*propriety power units and ignition systems had become much more reliable, and surface carburation was being rapidly replaced by the more dependable spray-type carburettors*' (Hartley, 1981). As well as the big manufactures small ones multiplied as they could buy-in difficult to make components leading to reliable motorcycles becoming generally available and affordable.

Specilist magazines, tuning kits and add-ons led to home mechanics 'souping-up' their machines. Widespread motorcycle racing inevitably followed, and at organised events protective headware became madatory. Fortuitously such headware had just become available. In contemporary American sportsware catalogues, the Reach No.0 had just appeared -'*The Reach New Head Helmet, we consider one of the best for protection of the head now on the market. Made of the finest Grain Leather lined with Best White Felt, extra strong, well ventilated. Made adjustable so that it will fit any size head. Endorsed by leading Universities and Colleges. No.0 – Each - \$3.00*'. Motorcyclists seem to have gravitated towards this new football helmet and judging by contemporary images it became an almost standard type in certain quarters.

Outside of the US there were few equivalent contact sport or transport related helmets to copy or adapt, just ornamental metal or leather militaty helmets, pith or cork sun-helmets; cork army and police helmets and metal, leather or cork firemen's helmets, none of which were designed to stay on during accident induced acrobatics at speeds of more than 50mph. The American football helmet was an obvious starting point for crash helmet development for those who knew about them,as Cody obviously did.

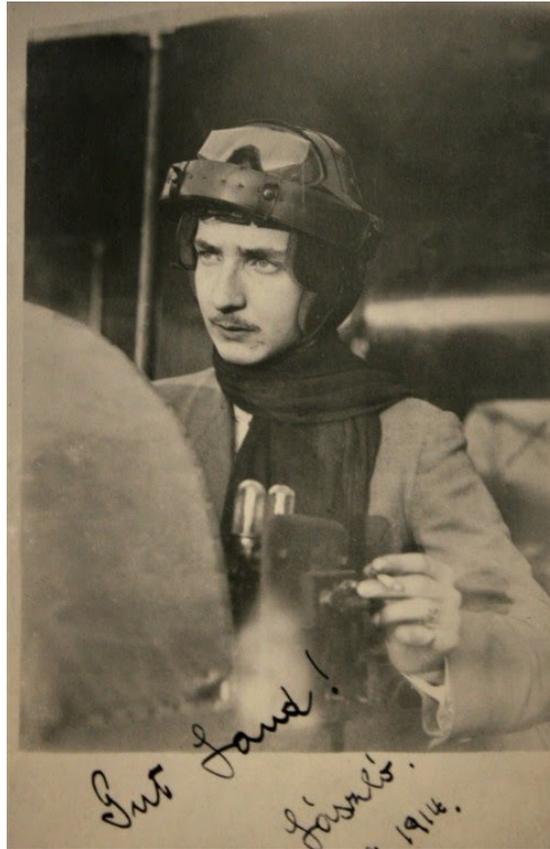


Figure 8. 1914 the latest dated image of a Gamages Aviation Helmet found. The message says 'Happy Landing!' in German.

Cody's/Gamages's Aviation Helmet of 1910; a product of a short lineage - late 1890s football helmet evolution; nascent motorcycle safety rules - transposed by an American-expat to the fledgling British aviation scene; was short lived. This author has found only one image of the Cody/Gamages Aviation Helmet in use after 1913 (see Fig. 8). It is well documented that the Rood helmet became very popular after 1911. In 1912 the Warren Safety Helmet was designed in Britain and it too became popular. To the east German aviation crash helmets also developed after 1912, unsurprisingly there was a simple 'lederhelm', the Sturzhelm M. 13, a hard leather dome with a horsehair or felt stuffed leather sausage around the brim and another fore-&-aft over the crown and a traditional, but affective fingered suspension system, providing a gap between the shell and head. Also in Germany there was an innovative Rood type by Heinrich Schmidt using a foam rubber or felt frame between double shells.

From its introduction the Gamages Aviation Helmet did not seem to catch on. Apart from numerous posed images of Samuel Cody wearing the helmet, there seems to be less than half a dozen images of others using it. Perhaps this is because even at that time it looked rather odd, also the protection offered by it was limited, using as it did compact felt as the shock adsorbing medium, with no gap between the head and shell. The Rood, Warren and Sturzhelm M13 were all much more streamlined in appearance and all had well designed shock absorbing mechanisms.



Figure 9. Developments of the type were tried. At **left**, even allowing for 'Vanity Fair's' artistic license (the moustache width!) in 1911 Cody appears to be wearing a prototype, with earflaps made of uncovered felt and a bulbous ventilator or buffer on top. **Center**, a 1913 Dunhill's advertisement shows the standard Gamages helmet to the right, but the other two are developments of the type. At **right**, a German aviator in 1913 wears a version, with a M. 13 type peak and a neat sausage buffer.

The Rood helmet was adopted by the French military in 1912, followed by the militaries of several other countries, the sturzhelm M13 was likewise adopted in the German and Austro-Hungarian spheres. Even in its home country the Rood and Warren were the only two helmets officially chosen as 'sealed patterns' by the Royal Flying Corps in 1914. It seems the Gamages Aviation Helmet was already considered obsolete, with the next generation of double shelled or sprung safety helmets taking over.

The 1910 'Gamages Aviators Helmet', the *first purpose made aviators helmet*, only just outlasted its inventor and chief publicist Samuel Cody; he was killed in a flying accident near Farnborough, the scene of his famous 1908 flight, on 7th August 1913.

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Figure 10. Coincidentally around 1930 collectors of football equipment started to describe helmets such as the Reach No.0 as 'Aviator Style Helmets', **at left**. Not because of knowledge of its relationship to the 1910 Gamages Aviation Helmet, but because of their similarity to aviator helmets made of hard leather with 'dog ear' flaps developed during WWI and used into the twenties, e.g. the Spalding No.12, (at **right**) which was adopted by both the US Army and Navy airforces. The Spalding No.12's hard shell and similar deeper ones were used in the more common 'cowel' types, lined with sholder length soft leather and having a detachable shoulder cape. Collectors of aviation helmets conversely call the Spalding No.12 etc., 'Football Style Crash Helmets'!

Steve Saunders, Rabaul (Sep. 2021)

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