

Great War British & Empire Sniping Equipment (part 2*)

by Roger Payne

The Watts Telescope (Figure 1)

These are conventional terrestrial low power telescopes (approximately x2 magnification and broadly similar to the Aldis and PPCo). They were produced by (or for?) the London based company of ER Watts and bear the company name marked on to the ocular housing, together with the serial number of the individual instrument. Total procurement for the military is likely to be a little in excess of 150¹.

Concerning the method of attachment to the SMLE, the few surviving examples that the writer is aware of either have no rings remaining on them, or else each has different types of mount; so it is certain that more than one different mounting system was utilised to attach these telescopes to their rifles. To illustrate the point further, the author has three Watts telescopes in his collection; one no longer retains any mounts; one bears the remains of Daniel Fraser mounts; and the third sports Alex Martin rings (this last mentioned telescope also came into the writer's possession with its mount base produced to conform to the contours of the SMLE rifle body). Additionally, a fellow collector in the UK possesses a fine example of a Watts scope bearing Purdey rings which are normally associated with the Aldis telescope. According to surviving documents¹ Watts telescopes were set up by Daniel Fraser (36), J Rigby and Co (100?), and Jas Woodward and Sons (exact total unknown but likely very few). Clearly it is impossible to quote figures with any degree of certainty when both records are incomplete and surviving examples differ in mount type in some cases from what is indicated in those records that are



Figure 1. The Watts telescope. This particular example bears Purdey mounts more usually associated with the Aldis 'scope.

still extant. Indeed contract details in the case of some contractors simply state 'fit telescopic sights', and we cannot assume that in all cases they necessarily fitted instruments using their own mounting systems. Other contracts state 'fit telescopic sights supplied by the War Office'. Here, it is impossible to know whose telescopes were supplied and fitted. Thus, the waters are greatly muddied for the Watts, as well as other small volume production telescopes and mounting systems, the possible permutations of rifle, telescope and mount being quite considerable.

The Evans Telescope (Figures 2-4)

Recent discussion between the author and a leading authority on the London gun maker William Evans suggests that much of their product range (other than many

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Figure 2. Side view of Short Magazine Lee Enfield rifle fitted with bases for the William Evans telescope.

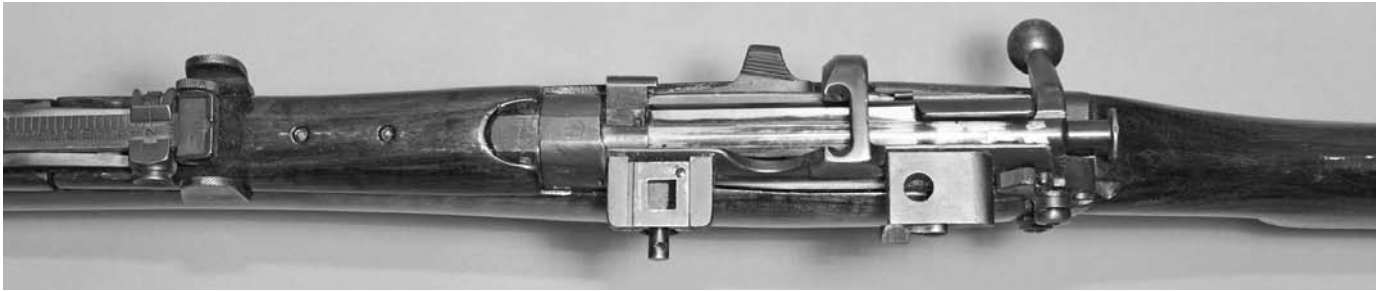


Figure 3. View from above of service rifle fitted with Evans bases.



Figure 4. Dismounted Evans scope complete with leather carrying case.

firearms themselves) was sourced elsewhere and simply retailed (or at best assembled and then retailed) by them. Admittedly this was a common practice in the domestic gun trade generally at the time. If the above supposition is true it must be admitted that the identity of the third party manufacturer is to date unknown. Regardless, surviving contract details indicate that somewhere in the region of 110 to 130 instruments were supplied to His Majesty's government, the breakdown being as follows; 1915 for the supply of either 60 or 80 instruments (there is a discrepancy in the figures here and it is not certain if all telescopes supplied were of the Evans type, or may have included some produced by Goerz); 02/02/1916 was the contract date for the supply and fitting of a further 60 instruments.

The Evans telescope is again of a conventional terrestrial telescope type design and is quite similar to the Watts and the first three patterns of Aldis 'scope. It is readily distinguishable from these others by the possession of a knurled focussing sleeve that extends around the entire 360 degree circumference of the telescope tube. The maker's name is generally engraved along the left side of the scope tube.

Two distinct mounting systems seem to have survived. Perhaps the best known being the large cast aluminium rail mount that exists on the complete rifle that is in

the Imperial War Museum collection. This is the only example of this type known to the writer. However, more prevalent (though also very scarce) are the surviving more conventional two piece mount types, of which certainly a few telescopes seem to exist in private collections around the world. The front ring bears a single 'foot' which locates in a corresponding slot in the front mount base, which in turn is located against the rifle body side wall, its front edge butted up against the rear face of the receiver ring. The rear ring bears a cylindrical peg projecting downwards and which is notched to lock up against a roll over catch on the rear mount base. The rear base is also attached to the rifle body side immediately in front of the safety catch. The slot into which the foot on the front ring locates is mounted on a laterally adjustable dovetail. There would appear to be two variants (at least) of the front mount base that have been noted; one which incorporates a slightly projecting threaded bar with a 'tommy bar' hole drilled through it, permitting of relatively precise lateral adjustment by the winding of the dovetail one way or the other; the other pattern is essentially the same in principle, but simpler in that there is no lateral adjustment screw, movement of the dovetail block being effected presumably by means of a cramp or drift. As with most other mount systems of the era the Evans is mounted on the rifle offset to the left. Range drums are found graduated from 1 to 6 representing hundreds of yards, in keeping with usual practice at the time.

The Fidjland Telescope

The total number of this pattern of telescope accepted into service is unknown, but almost certainly is very small. It was developed by the Norwegian inventor of the same name and its spelling is often 'anglicised' into 'FIDGELAND'. Surviving telescopes are very few in number. The author's example does not bear an engraved government broad arrow mark (though the broad arrow was far from universally applied in practice, particularly on instruments procured early on in the war), but appears

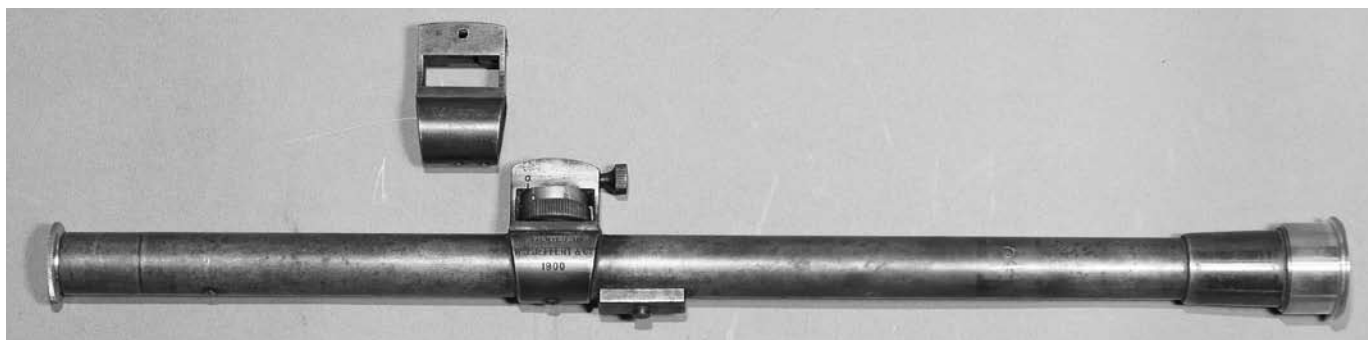


Figure 5. Side view of the Jeffery telescope. The example shown is civilian issue, but apart from very minor differences in the range drum saddle the two variants are virtually identical.

to be of the type utilised and, apart from lacking anything of the mounting system, appears to be the same as the example shown on page 34 of 'The British Sniper' by Skennerton. The mount on the telescope shown in the book appears to be a rail with some sort of locating rim at the front and a locking screw at the rear. Quite what was the exact appearance of the mount base is not known.

It is believed that the Fidjland telescope was rated at a nominal five power magnification, and it has a relatively narrow field of view. The range drum, in common with some of the early purchase telescopes, is graduated from 1 to 5 rather than 1 to 6. Interestingly the author's example is marked 'Fideland' on the telescope tube. It is not known if the designer of these telescopes was also the manufacturer, or whether they were manufactured in the UK (or elsewhere) under licence.

The Jeffery Telescope (Figure 5)

These instruments were supplied by W Jeffery and Co Ltd of London in two batches of fifty on 06/02/1915 and 19/01/1916. It is further documented that the famous gun maker of W Jeffery also supplied big game rifles for 'loop hole busting' in addition to the telescopes referred to above. The Jeffery scope is of a lesser diameter than most of its Great War era equivalents, being more reminiscent of the Winchester series of telescopes in this respect. The telescopes were marked 'W J Jeffery and Co Ltd. London.' on the range drum saddle, and military contract examples are readily distinguishable from their civilian counterparts due to minor differences in the range drum and saddle assemblies, and the presence of a rifle serial number on the opposite side to the manufacturer's markings. It is quite clear from the surviving inter war Pattern Room Collection list that some of these telescopes were fitted to the SMLE, although others were fitted to the long rifle, two examples of which, bearing mount bases for the Jeffery, still reside in the National Firearms Collection (formerly The Pattern Room Collection).

The 1916 List of Changes 18392² concerning the introduction of a rubber eye cup for telescopic sights acknowledges that it was not suitable for the Winchester and Jeffery patterns of telescope due to the previously mentioned smaller scope tube diameter.

In addition to the telescopes discussed above it is known that other types were also fitted to service rifles, and these include though are not limited to the Stanley (sometimes spelled 'Standley'), Westley Richards, Rigby, Gibbs, Baker, and others, including small numbers of instruments from German and Austrian manufacturers such as Goerz, Fuess, and Kahles. It is believed that

these were early procurements and were probably drawn from existing supplies of optics purchased by the War Department from the domestic trade.

It is unlikely that we will ever know and understand the full range of telescopes and mounting systems used during The Great War, and when even a relatively common telescope such as an Aldis turns up with its mounts intact these days there is much excitement amongst collectors. Due to the extreme scarcity of surviving examples of other early issue scopes the author must perforce move on from the field of scopes issued on a small scale with the SMLE and long rifle, to the subject of the sniper's rifle that followed the many and varied SMLE variants, and which represented the first truly standardised design; the Pattern 1914 sniper's rifle.

Enter the Pattern 1914 Sniper's Rifle (Figures 6-8)

The early and mid-war sniping equipments were predominantly SMLE based and generally bore offset telescopes. It is said that the army considered the ability to charger load more important than placing the telescope over the rifle bore, and the controversy over whether this was the right thing to do has raged ever since. Certainly British and Dominion troops were generally equipped with SMLE's fielding offset telescopes for the entirety of the war. But not quite entirely so.

It is clearly documented that Major H V Hesketh-Prichard, CO of the Second Army Sniping School had expressed his view that rifles equipped with offset telescopes put allied troops at a disadvantage in the sniping war against the Germans, and that remedial measures should be taken most urgently to supply the troops with rifles fitted with over bore optics. Clearly he



Figure 6. Side view of the receiver area of a Pattern 1914 sniper's rifle equipped with the Model 1918 telescope

cannot have been the only complainant because by 1917 there were signs of movement in the army hierarchy.

Whilst it was arguably the most rugged bolt action combat rifle ever to see service the SMLE, if truth be told, was not ideally suited as a base for a telescopic sight: the receiver was light, with rounded contours, and flexed appreciably on firing. The barrel was relatively light in profile and SMLE's were also quite sensitive to variations in stocking up, which could materially affect accuracy. Not only this, but some of the mounting systems used with the telescopes supplied, were not of the best from a design point of view. For example, the Whitehead Brothers' mounts used with the Winchester A5; the front mount base was secured not directly to the rifle body or barrel, but to the rear sight protector, which in turn was attached to the wooden fore end, and so subject to many variables that could adversely affect consistency of shooting. Added to all of this was the simple fact that there was no uniformity or consistency in the sniping equipments on issue. Fortunately it was eventually accepted that the troops needed a purpose-designed sniping rifle using a modern telescope design on over the bore mounts that preferably also permitted of the use of the rifle's iron sights.

Prior to the outbreak of war trials were going on with a Mauser type rifle design in a new .276" rimless high velocity calibre as a possible replacement for the Lee Enfield series. The onset of war and the urgent need to produce arms in huge quantities rapidly ensured that that never came about. But, the new Pattern 1913 rifle was rechambered to .303" calibre and contracts were signed with both Remington and The Winchester Repeating Arms Company in the USA to produce the rifle for British and Dominion troops. Of course, as often happens, by the time that the rifles went into production and started arriving in the UK in quantity the crisis had abated somewhat, and there were generally enough of the service issue SMLE for the front line troops (the first Pattern 1914 rifles arrived in the UK in late 1916 and not in quantity until 1917). Even so, small numbers of these new rifles were evaluated and it was soon found that at practically encountered ranges the average Pattern 14 rifle was appreciably more accurate than the average SMLE. Consequently Pattern 14 rifles were issued to the Sniper Training schools in France in 1917, and this was soon followed by a request for a rear sight capable of a finer degree of adjustment for use on these rifles. This led to the 'F' Rifle, officially introduced on 22/11/1917, and issued late in the war to the troops on a scale of three per battalion. The rear sight of the 'F' rifle was modified by the incorporation of a finely threaded worm wheel with an adjusting knob fitted to the right side of the existing iron sight. This permitted of a much finer degree of incremental adjustment of the rear sight than by just the manual moving of the spring loaded catch on the standard sight cursor.

Again, in 1917, a German Hensoldt light telescopic sight on claw mounts was captured and sent back down the line for evaluation. It was sufficiently impressive to be copied in a modified form, eventually morphing into the Model 1918 Telescopic Sight (the trials being supervised by Lord Cottesloe and Lt Col LH Robinson, Chief Inspector of Small Arms at RSAF Enfield). But retracing our steps a little, on discovering the inherent accuracy of the Pattern 1914 rifle, Aldis telescopic sights were soon obtained for



Figure 7. Pattern 1914 sniper's rifle viewed from above.

mounting on to available rifles in small quantities using claw mounts, and were found to produce good accuracy results. For reasons of which the author is unaware the Aldis was not generally adopted for use on the new sniper's rifle, and the Model 1918 telescope was accepted into service, being produced by The Periscopic Prism Company of Kentish Town in London (well known for their production of the modified Fuess telescope that bore their name and was fitted in offset dovetail mounts on the SMLE earlier in the war). The decision to mate the new telescope to the new sniper's rifle had been made by the Spring of 1918, and quick detachable claw mounts were to be used as the mounting system. Additionally, all rifles were to be fitted with the fine adjustment iron sight as well as the M1918 telescope.

The new telescope was rated at x3 magnification and had a reasonable field of view of 7.5 degrees. As referred to above, it was produced by the Periscopic Prism Company in London. This company had not had a particularly smooth or profitable war, and as a result of its inefficiency was taken over by the Ministry of Munitions, so as to permit of direct supervision over production. Manufacture of the new telescope and mounts took place there and 2001 complete equipments were produced in total, commencing in the Spring of 1918. (A further 79 equipments were produced by BSA but these are unrelated to the UK contracts and were produced specifically for the Irish Free State during the 1930s).³

Arriving at the very end of The Great War the Rifle, Pattern 1914 W Mk1* (T) really did not get much of a chance to prove what it was capable of, and in practice saw far more active service during World War Two, before being eclipsed in its turn (at least in the European Theatre of Operations) by the No4 Mk1 & Mk1* (T).

A rubber eye cup was also introduced for the Model 1918 telescope and perforce differed from earlier types for the Aldis and PPS due to the newer scope's smaller diameter ocular and objective housings. Although precise quantities are not known, surviving telescopes exist suggesting that as well as the Model 1918 instrument the Periscopic Prism Company during 1918 did fit some Aldis



Figure 8. Canvas scope case issued with the Model 1918 telescope as used on the Pattern 1914 snipers rifle.

telescopes into claw mounts for use on the new sniper's rifle. Mount bases in some cases are thought to have been the same as those used with the Model 1918 telescope, and the rings also, save for them being of 1" diameter to accommodate the larger instrument. It seems quite feasible that these equipments were produced at about the same time as the very similar over bore claw mounts that were developed for the SMLE. Further, some later production Aldis telescopes have been noted with range drums graduated from 1 to 10 (100 to 1000 yards) rather than the more usual 1 to 6 graduations found on most WW1 UK military contract telescopic rifle sights. On these particular examples the scope tubes are engraved 'fitted by Periscopic Prism Co Ltd London 1918. At least one set of mount rings for the SMLE have also been noted engraved similarly except that the date was 1919. (A very few other sets of SMLE mounts have been noted in the white and unmarked).

Previously, journal articles have referred to the Rifle No3 Mk1* (T) A as a WW1 issue sniping rifle. This is an understandable error to make, as both the rifles (Winchester manufacture Pattern 14's) and the telescopes (usually the Aldis, but also on occasion the PPCo, Watts, and Evans models) are all of 1914 - 1918 vintage. However, these rifles were set up early in WW2 on a non-readily detachable side rail mount, by Alex Martin of Glasgow. An initial batch of 400 rifles was completed, and an order for a further 400 was placed, although only 21 equipments were completed before the contract was cancelled (presumably as the much better No4 (T) was starting to become available) in 1941.

The official date of introduction of the Pattern 1914 Sniper's rifle was 31/12/1918 but production had commenced some months before this. The specification, number SA 452A is written out in full on pp 77 to 89 of Skennerton's 'The British Sniper', along with instructions on care and adjustment of the Model 1918 telescope, for those seeking more detail.

During WW2 whilst most Dominion troops were equipped with British produced, or at least, British pattern rifles, there was a reasonable amount of experimentation in both Australia and Canada, in order to augment supplies and meet local need. However, in The Great War, whilst there was a far greater multiplicity of sniping telescopes and mounting systems, virtually all of these originated from the UK. The sole official exception being the sniping use of the Model 1910 Ross rifle by Canadian forces.

The Ross Rifle in a Sniping Role (Figure 9)

The development and adoption of the Ross Model 1910 straight pull bolt action rifle has been well documented elsewhere, and it seems that politics and economics played as much of a role in producing the Ross as did military necessity. Certainly, at the onset of the Great War Canadian forces were equipped universally with the Ross rather than the SMLE or other models of the Lee Metford/ Lee Enfield family. The Ross has long been as not being a very robust or safe design, a reputation it does not fully deserve. Admittedly it was possible to assemble the bolt incorrectly resulting in the rifle firing without the bolt lugs locking up, but a remedy for this was found soon enough. There is also no doubt that

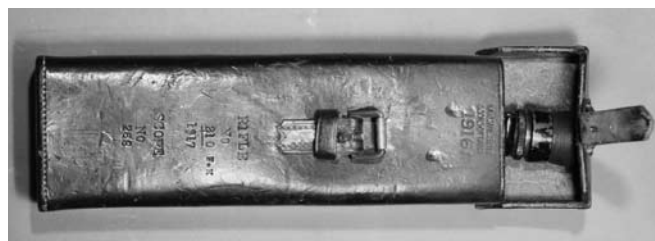


Figure 9. Leather carrying case for the Canadian issue Warner & Swasey telescope.

the chamber of the Ross was machined to very tight specifications and this, combined with indifferent quality wartime produced ammunition led to frequent jamming when a number of shots had been fired and the rifle heated up. The problem would be further exacerbated by the ingress of mud into the mechanism, something almost unavoidable on the Western Front. These factors probably account for the stories of soldiers resorting to kicking the bolts back to extract and eject the fired cases that were stuck in the chambers of their rifles. Again, a simple remedy was found, that of reaming out the chambers a little.

However, one thing can be unequivocally stated about the Ross rifle; it was very accurate, lending itself rather better to its employment as a sniping rifle than the SMLE ever did. Indeed the Ross converted to target rifle guise could be seen performing admirably on rifle ranges around the world for several decades following the Great War.

Many of the target and Galilean sights produced for the SMLE, MLE, and CLLE rifles were also adapted and produced for the Ross, so it would seem highly probable that enterprising individuals are likely to have taken them with them when they went to war. But there was only one formally contracted and produced sniping variation of the Ross, this being an entirely North American set up, making use of the US designed and produced Warner and Swasey Model 1913 musket sight (Figure 10). Warner and Swasey of Cleveland Ohio had produced a prismatic type telescopic sight that was adopted by US forces as the Model 1908. Following modifications the Model 1913 appeared and was also taken into US service. It is this latter model that was also produced for Canadian use, the first order for 250 instruments dating from 11/03/1915, and the second from 19/02/1916. Deliveries were completed in July 1915 and October 1916 respectively. Telescopes were fitted at the Ross Rifle Co. factory in Quebec, using

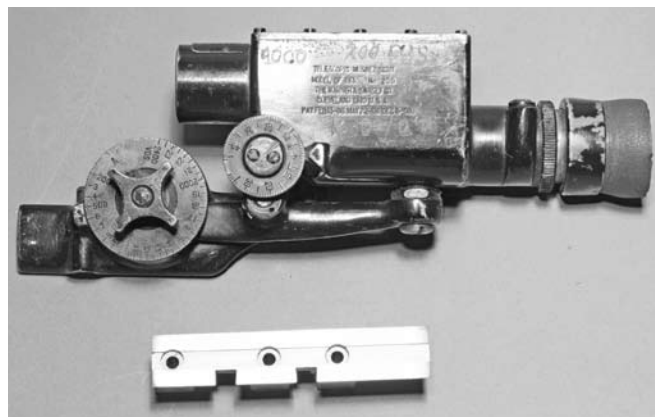


Figure 10. Warner & Swasey telescope shown with reproduction mount base for the Ross Model 1910 service rifle.

part-finished mounts provided by the Warner and Swasey company. Final machining and heat treatment were carried out at the Ross company premises.

The telescopes are of a rather unconventional appearance, working on the Porro Prism principle unlike most conventional terrestrial telescopes. They were rated at an impressive six power magnification but had a narrow field of view of only four and a half degrees. Sights produced for the two Canadian contracts had the range adjustment calibrated for .303" ballistics, and the original range plate which was attached to the top of the scope housing and which was only relevant to .30"- 06 ballistics, was removed. Canadian issue scopes were also serial numbered separately to those produced for US service and are numbered from 1 to 500. All telescopes possessed their own leather carrying case and these appear to have been 'locally' produced in Canada. The first 250 rifles were completed by late 1915 and it is known that eighty were sent to the front line, though it is not entirely clear how many more, if any, were sent subsequently. A January 1918 return for Canadian sniping rifles distributed throughout all four of the Divisions constituting the CEF indicates that there were 65 Ross rifles and 81 SMLE's to hand. However, it is thought that these figures are incomplete and are therefore underestimates.⁴ All Ross rifles appear to have been fitted either with the W and S or the Winchester telescope (presumably the A5, B4 or B5). As late as 1937 Ordnance returns showed 399 Mk3 Ross/W and S sniper's rifles to be held in store, and most of them purportedly in unused condition.

Front line service of the Ross/W and S combination resulted in further problems coming to light: the heavy offset telescope was not liked, and would often not retain its zero when the scope was removed from the rifle and then subsequently replaced. This led to tales of snipers jamming razor blades between the mount base and the upper mount assembly in order to secure things more rigidly. Of course, under these conditions scopes must have remained semi-permanently on rifles and must have been a nightmare to remove from their rifles when it was eventually desired to do so!

Most of the difficulties associated with the Ross/W and S combination in a sniping capacity were due more to problems with the scope and/or mount than to deficiencies in the rifle itself, and so perhaps it is fortunate that other telescopes were fitted, albeit unofficially, to the Ross with some success. Use of the Winchester A5 fitted on dovetail 'V' blocks and often on rifles with cut back 'sporterised' woodwork, is well known. Additionally other telescopes

were fitted by Canadian armourers, and these include examples of the Periscopic Prism Company (modified Fues), and captured German instruments. Of these unofficially fielded variants it would seem that the Ross/Winchester combination was the most commonly employed, though the number assembled is unknown.

It is difficult to know where exactly to draw the line when writing on the subject of Great War sniping, and exactly how much to include; should one describe luminous sights, periscope rifles, or 'big game' rifles utilised for 'loop hole busting', for example? However, the line must indeed be drawn somewhere and the author of this modest article is more than happy to let some other brave soul tackle describing these and other aspects relating to the wider subject of Great War marksmanship.

Much of the above information is available in standard texts on the subject, but some detail concerning the various mount configurations has come from the author's own observations of items in his own and colleagues' collections. Any errors of omission or false assumptions he may have made he accepts and apologises for.

This brief article would have been far less than it is without the help of a number of friends and institutions. These are individuals or organisations who have either helped specifically with this text, or who have enriched the author's life over the years with their friendship borne of a shared interest; David, Carol, and Jenny Tomkinson, Hugh Rees, Nigel Greenaway, Captain Peter Laidler, Richard Stork, Eric Kirk, Simon Deakin, Martin Pegler, Tony & Robert Hallam, Tony Watts, Robert Hanna, Harry Furness, Ian Skennerton, The late Bruce Gorton, Robert Etherington, Richard Ruiz, The National Firearms Collection (formerly The Pattern Room Collection), The Imperial War Museum and The Royal Armouries.

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