



The Butts Bugle GSRD Newsletter March 2015

Dear Shooters

Welcome to the March edition of the GSRD newsletter. After the Xmas and new year break shooters were keen to run a zeroing practice for our first range meet of 2015 so there was a good attendance.

The weather that day was hot and windy. Shooters zeroed at 300 and 200 yards and were happy with their results as once again there was good communication and target indications from the butts -which all help in the zeroing process.

Two new faces join us on Sunday David M and David S -it was their first time shooting with the GSRD both enjoyed their visit and look forward to next month's P3 practice.

Brian W dusted off his No4 Mk1 Lee Enfield and finally got it zeroed and shooting accurately. This rifle is in mint condition with all matching serial numbers and a great shooter. Brian's hand loads were consistent at 200 and 300 yards and performed well. Brian spotted while I attempted to zero his No4. I enjoy using the Mk 1 Vernier which has in my opinion an excellent sight once you get use to it and know the sights click values for shooting at distance.

I've included some information and diagrams on the Mk1 Vernier Singer or Leaf sights.

Note click values for a vernier or Micromere rear sight are:

1 click up or down = 25 yards

4 clicks up = 100 yards etc

50 yards = 45.72 meters

100 yards = 91.44 meters

200 yards = 182.88 meters

300 yards = 2274.32 meters

When the British Army were ironing out the many design problems so the No4 rifle could be massed produced one of the first features to be discarded was the Mark I backsight -a major bottleneck to production, this was replaced by the Mark II dual battle sight.

The Mark II pivoted on an axis pin and had two small leaves in which were apertures, one being in the vertical position for use whilst the other was horizontal. One was marked 300 for use at ranges up to 300 yards with the bayonet fixed, the other was marked 600 for use at that range without the bayonet.

The Mark II sight didn't cater for intermediate ranges, the firer had to use his own judgment in aiming up or down. It was a very crude sight but was introduced owing to the lack of manufacturing facilities for the Mark I sight.

Problems appeared with zeroing as the No 4 rifles were factory zeroed without the bayonet because the bayonet's effect on shooting varied, with differences in fit of bayonet on rifle, etc so there was no guarantee that the rifle could be correctly zeroed with the bayonet fitted to the rifle.

Efforts were made to design a simplified tangent aperture backsight with adjustment for various ranges that would be easy to manufacture.

In September 1942 a sample sight made by the B.S.A. [Birmingham Small Arms] company was tested by the Small Arms School, it was made from pressed steel and comprised a leaf and slide with aperture. The slide was held in position at the desired range by a spring which engaged in serrations on the side of the leaf. It was very simple in construction and easy to produce.

The Small Arms School considered the new sight a great improvement over the Mark II dual sight and would resolve the existing zeroing difficulties with the NO 4 rifle

The soldier would have a sight on his rifle which would enable him to engage targets at all battle ranges without having to calculate the amount he would have to aim up or down for intermediate ranges and would dispense with the necessity of having bayonets fixed when engaging targets up to 300 yards.

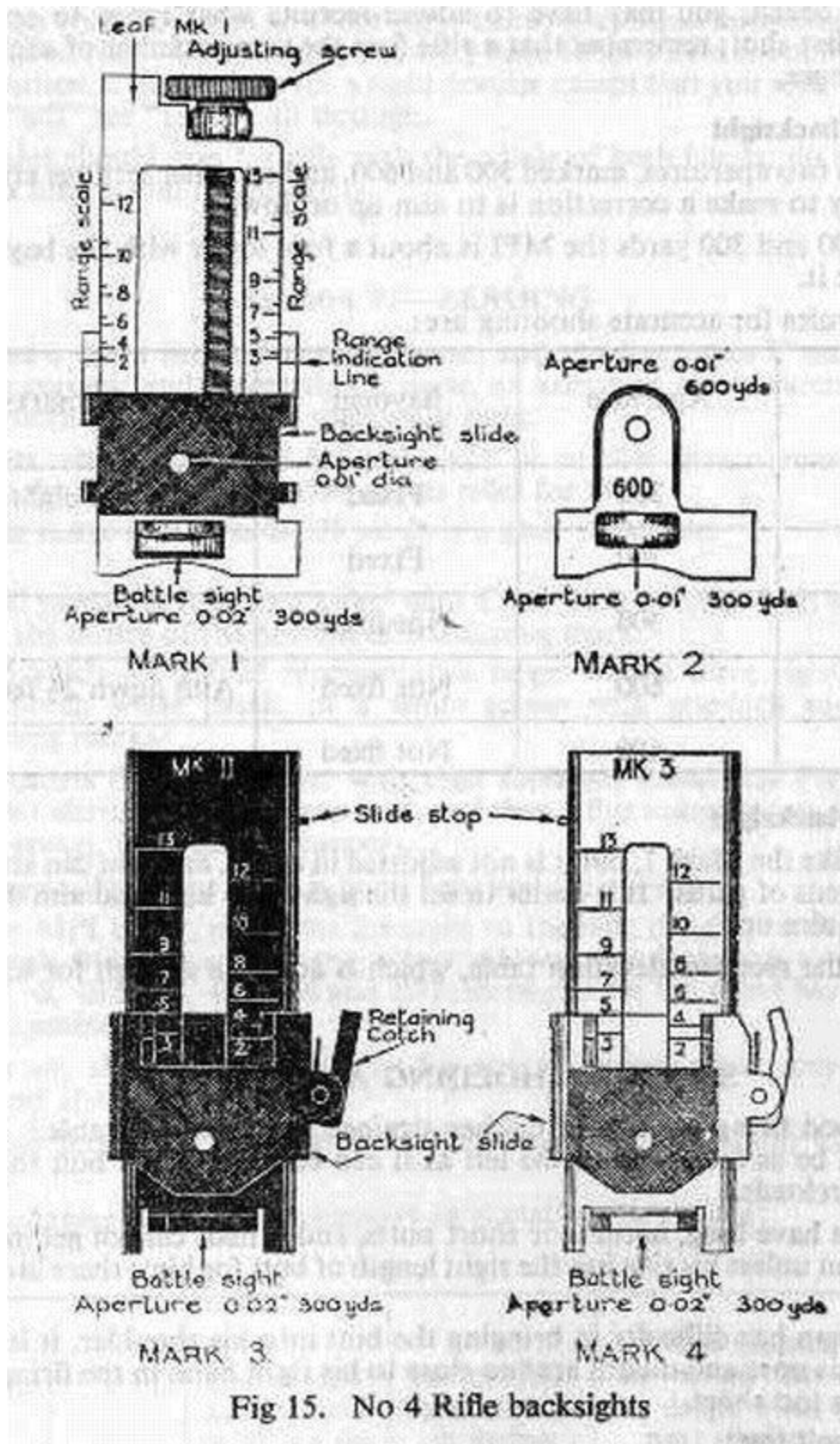
It was considered easier to learn and teach and cheaper to produce, than the existing

backsight.

The Government Design Department had developed a similar type of pressed steel sight in which the slide was held in position on the leaf by a catch and spring.

The leaf was graduated from 200 to 1300 yards in 100 yards increments and incorporated a battle sight for ranges up to 400 yards. This sight was eventually adopted and introduced on 23rd April 1943 as the Mark III. Although fulfilling its purpose, it was soon in trouble with the troops the protruding catch - head was easily damaged and broken, and the slide was not efficiently secured by the influence of the small coil spring.

The sight was soon replaced by the Mark IV a very similar pressed steel pattern but with curved catch making it less vulnerable to damage, supported by a stronger spring of the mouse-trap type.



The foresights for the No4 rifle were issued in 4 distinct types of foresight blade -the

first was designated "the blade" foresight came in eight sizes, from -030 -015 0 + 030 + 045 + 060 and + 075. These sizes indicate the tip of the blade height below or above 1 of the exact centreline of the bore while the blade size 0 is exactly 1 above the centre line of the bore -all you No 4 owners would know this by heart!

Précis No. SA/Rifles/3

RIFLE ZEROING TABLE

RIFLE	No. of Blades	Lowest Blade	Highest Blade	Range	Variation in MPI with one alteration of Blade	Correct Position of MPI in relation to Point of Aim
No. 1	7	-.06"	.03"	100 yds 25 yds	2.77" 0.69"	3" directly above ½" directly above
No. 3	9	-.015"	.135"	100 yds 25 yds	1.70" 0.50"	3" directly above ½" directly above
No. 4	8	-.03"	.075"	100 yds 25 yds	1.87" 0.475"	3" directly above ½" directly above
No. 4 with Mk 2 Back Sight	8	-.03"	.075"	100 yds 25 yds	1.87" 0.475"	6" directly above 1½" directly above
No. 5	8	-.03"	.075"	100 yds 25 yds	2.33" 0.582"	3" directly above ½" directly above

Table 2. Elevation Zeroing

Firearm	No. of blades (ii)	Lowest Blade	Highest Blade	Sight radius	Range	Variation in MPI with one alteration of Blade	Correct Position of MPI in relation to the Point of Aim (iii)
No.1 (i)	7	-.06 Inch	.03 Inch	19.5 Inches	100yds 25yds	2.77 Inches 0.69 Inch	3 Inches above ¾ Inch above
No. 3 P14	11	-.015 Inch	.135 Inch	31.5 Inches	100yds 25yds	1.70 Inches 0.50 Inch	3 Inches above ¾ Inch above
No.4 (Mk 1 sight)	9	-.045 Inch	.075 Inch	28.5 Inches	100yds 25yds	1.87 Inches 0.475 Inches	3Inch above ¾ Inch above
No.4 (Mk2 sight 300 yds)	9	-.045 Inch	.075 Inch	28.5 Inches	100yds 25yds	1.87 Inches 0.475 Inch	6 inches above 1 1/8 Inches above
No.5	8	-.03 Inch	.075 Inch	23 Inches	100yds 25yds	2.33 Inches 0.582 Inch	3 Inches above ¾ Inch above
Sterling SMG	1	Adjustable (32 turns to the Inch)		16.25 Inches	100yds 25yds	0.19 0.048	NA

- (i) Changes in marking between Mk VI &Mk VII ammo. Circa 1910 when Mk VII ammo introduction saw the number of blades increase from 5 to 7.
- (ii) The height for the blade portion remains constant with the height of block changed to accommodate the different heights. The front edge of the blade and block along with some having dovetails depends on which firearm and foresight band or base it is designed to fit. More information available in the [Skenerton](#) and Stratton publications.
- (iii) Based on using the set (lowest setting on the No1 rifle and the set or lowest aperture rear sight for the other rifles)

All information is courtesy of the Internet.

Thanks to everyone who attended -your support and input is appreciated.

Kind Regards

Matt V

GSRD Coordinator /20/3/15