

# Thames Valley Guns

## BSA .22LR No6 Rifle

### Introduction

Recently I have spent considerable time and effort inspecting, studying stripping, rebuilding, upgrading and writing various Armourers notes on rimfire rifles and the one thing that constantly stands out is the lack of British manufactured rifles which remain in this field. The sole remaining rifle industry in the UK is restricted to specialised military small arms, highly specialised target and hunting rifles. Sadly with the closure of the firearms side of BSA (British Small Arms Co Ltd) in 1973 the manufacture of British rimfire rifles disappeared and now the market is dominated by foreign company's such as CZ, Ruger and Anschutz to name but a few.

In an attempt to focus on British rifles, I had contemplated writing some notes on the BSA Supersport five and even brought a rifle in anticipation but for some reason the rifle lacked any appeal and I sold it. More recently I purchased a old Lyman Junior rifle scope manufactured in 1935 and was looking for a suitable rifle to mount it on. I looked at the BSA 12/15 but they are still fairly plentiful and therefore were insufficiently unique to hold my interest. However in January 2014 I stumbled on unusual BSA .22 Martini that was advertised by the seller as a No12 model but it looked slightly different and had a rebated receiver. Upon closer inspection I identified the rifle as the "take down" version of the BSA No6 and therefore it was clearly time to snap the sellers arm



off. When the rifle arrived I was amazed at its condition, rifling was sharp and appeared un-used. The woodwork was in good condition, all the sights were original, only the butt plate was worn and oversized. When I tried to removed the action it appeared stiff. I removed the barrel and had to tap the action out of the receiver with a brass punch. The cause of the stiffness then became apparent - solidified oil. This indicated to me that the rifle had sat stored for such a long period of time that the oil had time to solidify and therefore had stumbled across quiet a find.

Restoring this rifle was going to be a dream as this rifle was in such good condition to start with. My plan was to remove all the solidified oil, service, restore the woodwork, butt plate and finally fit a period scope.

### Brief History

The Martini-Henry rifle was adopted for British Military service in 1871 and was a milestone in British Military history. It was the UK's first purposely designed breech loading rifle and was at the time of its introduction superior to any other service rifle, then in use. The Martini was a masterpiece of design for its time and continued in service throughout the British Empire for the next fifty years and continues to this day as a successful smallbore sporting rifle.

At the turn of the 20<sup>th</sup> century and unlike the politically correct world we live in today where the law abiding shooter is constantly harassed by politicians and "ban the gun mobs", shooting was actively encouraged and was a popular pastime enjoyed by a large proportion of the public.

As with all service rifles there are numerous "spin offs" and the Martini was no exception with examples such as training, riot control and of course, civilian sporting use. Therefore it was no surprise that the Martini was adopted for training and civilian target use using the ubiquitous .22 Long rifle cartridge. By 1909 BSA had introduced the first miniature or Small frame Martini with the military style No4 and at about the same time the civilian style No6.

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If the service rifle had a short coming I think most people would agree with me when I say the action was difficult to strip. The major difference with these small frame martini's was the martini style action was now contained within a self supporting frame and could be stripped by removing a single screw. Who designed this action I do not know but I assume it was by a designer employed at BSA.



locking screw which is depicted above.

### General

The No6 is aimed at the sporting and hunting fraternity rather than the target shooter and was fitted with a simple multi leaf rearsight, blade foresight and a small lightweight forend. The rifle is 40" (102cm) long and 1.2" (30.5mm) at its widest point. The action is a tilting block mechanism, actuated by a lever behind the trigger guard and is single shot only. Although produced in .22 short, .22LR and .300 extra long, it survives today predominately in .22LR and weighs 5lb 12oz.

### Information

For such a common rifle, information on these rifles is fairly scarce but the best web based information source is at <http://www.rifleman.org.uk/index.htm>. Although I have never read a copy there is also a publication by John Knibbs, titled "The Golden Century" which is about the BSA company, but this appears to be a rare book indeed and one that I have not been able to obtain a copy off.

### Receiver

The small frame receiver is 4.2" (107mm) long and 1" (25.5mm) wide and has the unique profile of the Martini Action. The No6 is slightly different in that the front section is 1.2" wide to accommodate the removable barrel. The barrel is retained using a single screw as is the trigger mechanism. Unlike traditional bolt action receivers the Martini receiver is extremely stream-lined, has a compact appearance and has no projections. From a manufacturing standpoint it is also easy to machine from a single block, requires less machining operations and therefore is more cost effective to produce. At the rear of the receiver is the butt socket, above this and on this particular model is the provision for fitting a BSA No8 folding rearsight and above that is a hole in the rear of the receiver and parallel with the barrel, which is to facilitate better cleaning by allowing a cleaning rod to pass through the receiver and into



rear of the barrel.

### Trigger & Bolt Assembly

In my humble opinion the trigger and bolt mechanism were an example of engineering brilliance at the turn of the 20<sup>th</sup> century. Lowering the lever, lowers the breech block, remove the single screw on the bottom right of the receiver and the action drops out of the bottom of the receiver.



The breech block pivots about its axis pin and its movement is control by the lever mechanism and its twin arms. Lowering the lever, lowers the breech block and opens the rear of the chamber. The last 1/2" of lever travel depresses the extractor arm which then pivots about its axis, causes primary extraction and ejects the case. At this point the twin arms are at the top of their cams and the breech block is held at its lowest point. The operator places a cartridge in the chamber and lifts the lever, this action causes the twin arms to actuate the breech block cams and lift the breech block. The breech block pushes the extractor into its forward position and an angled face on the breech block

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ensures the cartridge is fully seated. Once the breech block is fully closed the twin arms are at their lowest position, the breech block is at its highest position and mechanical lock is achieved. Mechanical safety has also been achieved and therefore the trigger can be pulled and the firing pin released.

Sitting in between the lever arms and utilising the same axis pin, is the tumbler. The tumbler is in effect another arm which engages in a slot in the firing pin and has a bent which engages the sear and trigger. As the operator closes the lever the firing pin is withdrawn, its spring compressed and the tumbler is retained by the trigger and it sears. Pulling the trigger releases the tumbler which in turn allows the firing pin to go forward and strike the cartridge rim and initiate the round.

The firing pin spring provides all the energy for the breech block mechanism, there is no manual safety although on this rifle and with other early models there is a gun state indicator. Linked to the trigger and running down the side of the breech block is the indicator, when the action is cocked the indicator sits proud of the breech block like a flag, when the firing pin is released the indicator is lowered and can no longer be seen above the breech block.

The only minor criticism I have of this action is that only an Armourer or Gunsmith can adjust the trigger pull and then only by stoning the sear/trigger bent. However with a crisp trigger pull of 4.6lbs I feel there is little need to do this.

### Wood work

Manufactured from walnut, the grain is pleasing but the woodwork is purely functional. The forend is short and light as one would expect for a sporting rifle, it is secured with a single screw and unlike the target models does not secure to the receiver in any way. This is to allow the barrel to be removed as part of the "take down" facility and whilst the forend is designed to support the barrel during firing it also supports the barrel when it is being unscrewed and refitted. To support the barrel in this function the forend is in complete contact with the barrel throughout its entire length.



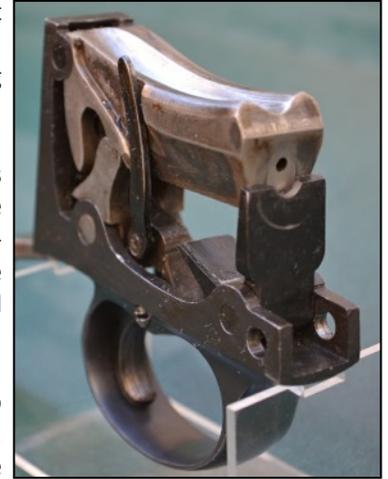
The butt like the forend is a simple and functional affair and is secured to the receiver by a large bolt passing through its entire length and secures into the butt socket. There is a simple plastic butt plate with BSA's logo and a sling swivel. The only thing the reader may note is a small notch or groove just below the rearsight. This provides sufficient clearance for the No8 rearsight when lowered to sit flush with the butt.

### Iron sights

The original sights are those shown below and consist of a barleycorn blade foresight and a rearsight with multiple folding leaves, marked 25, 50 & 100yds. At some point in the rifle's history a No8 folding rearsight was fitted, which greatly increased the rifle's accuracy but did prevent the barrel being cleaned from the rear.



The No8 rearsight is a lovely little aperture rearsight purposely designed by BSA for the Martini rifles and provides target grade accuracy and maximises the rifle's capability. Although this is a sporting rifle, the sights' multiple apertures would have provided the shooter with both target and hunting capability.



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### Barrel

The No6 rifle has a 25" tapered barrel which is 0.94" at the chamber narrowing to 0.6 at the muzzle. The muzzle has a square crown



which is in the white. Approximately 7" from the muzzle and at its 6 o'clock position is the front sling swivel which is brazed into the barrel and is a common feature on sporting rifles from the early 20<sup>th</sup> century.

At the knox form is BSA's logo and to the side the serial No: 59099 and various UK black powder and nitro proof marks. Beyond this point is BSA's details and the rifles calibre, otherwise the barrel is fairly unremarkable, other than to say for a barrel that is 104 years old, its condition can only be described as superb.

### The Lyman Junior Scope

The Lyman Junior scope was produced in 1935 and discontinued in 1936, it was designed for small bore rifles, had a magnification of 2.5 and featured Bausch & Lomb lenses with a fine wire reticule. Windage and elevation is integral with the mount.

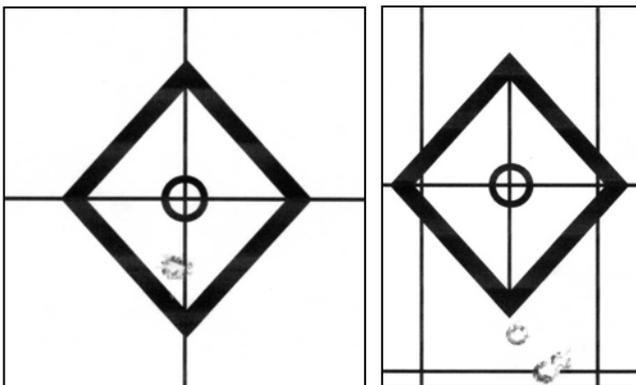


To fit the scope you need the skills of a Armourer or Gunsmith as the barrel requires drilling and tapping. The scope base fits to the barrel utilising two screws and although the scope sits centrally along the bores axis the mount is off-set to the right and therefore allows the shooter to continue to use the iron sights if required.

As my eyesight is deteriorating, I needed to fit a scope but I wanted a period scope that would be in keeping with the rifles character and the Lyman was in my opinion ideally suited.

### Range Test

As with all my rimfire range tests, I started at 25 yards shooting fully supported and utilising a bench. Zeroing the rifle was somewhat of an exercise as these old scopes tend to have backlash on the windage and elevation screws and therefore zeroing takes somewhat longer as the backlash causes you to over adjust.



My final group, depicted in the left picture was 5.5mm with all three rounds touching, however I forgot to lock the screws down and when I put the rifle in the gun slip I lost my zero.

Not realising this, I cleaned the rifle and returned it to the Armoury. A week later I went to test the rifle at 75yds. Using the same shooting position and equipment I achieved this 13mm group but sadly need to re-zero - how annoying.

Whilst the No6 lacks the heavy barrel of the target models and although I had made a mess of the zeroing, the rifle proved without a shadow of a doubt that it was extremely accurate and capable rifle.

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### Summary

Over the years I have worked on many different models of Martini, both small and large frame and I will be perfectly honest and



say that they held little interest for me over the years. However this No6 re-ignited my interest and the fact that this was a take down version, produced sometime after 1912 offered something slightly different. By adding a genuine period scope made the rifle unique, a feature which appeals to me no end.

It was by accident, rather than by plan that I obtained this rifle, the same way I obtained the Barnett .22 Target rifle. Therefore by sheer chance I have obtained two uniquely British rifles, something I am very proud off and intend to keep.

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