

MUZZLELOADER
FOLLOWING TRADITION

SIGHTING-IN A RIFLE

by Mike Nesbitt

Several winters have flown by since this campfire was burning but this child feels real good about bein' back in this camp. To those of you who visited here before, I holler at you with a hearty "welcome back" and to the newer arrivals let me offer a just as hearty "welcome". We're going to talk about several subjects here and the main focus for our conversations s going to be helping the greenhorns along the trail to becoming good seasoned hivernants. A 'hivernant', as some might not know, is a 'skinner who has 'spent a winter in the mountains', someone who is seasoned to traditional ways.

After all, there seems to be a lot of things that we have done which don't get mentioned again. Some of those things include information that the greenhorns still need to know. By the way, I use the term 'greenhorn' only to identify someone who is not yet experienced or seasoned to our ways, folks who are new to muzzleloading, especially with primitive guns. My use of the title 'greenhorn' is not meant to as a slam at all, I was a greenhorn and I was 'greener' than most at the time. So, you old hivernants out there will recognize most of our subjects as trails you've ridden down before. Let me ask you hivernants, just like I did over 20 years ago when 'Primitive Doin's' was started, to nod with approval when I hit and grunt loudly with disapproval when I miss the point on any of the subjects we talk about.

In this column we'll take looks at several subjects, some how-to-do's and other things. Obviously we won't look at the traditional side of muzzleloading all at once. That would be too much. Instead, let's take this broad subject one bit at a time, as it comes or as it is needed, something like 'you don't need moccasins 'till your hard-soles wear out'. We'll concentrate on our guns and our shooting but other subjects will find themselves in the spotlight too, just as if we were actually gathered around the campfire.

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Let's say we find ourselves on Trader's Row at a good rendezvous, or at a gun show, and we can't resist buying a particular rifle. That rifle might be one made by any of the several custom gunmakers, or TVM, or Jackie Brown. I'll be 'picking on' TVM for this example because I'm going to be saying some specific things about the sights on their guns which might not apply to the sights on other makers' guns.

To be more specific, this rifle we just acquired is a TVM .50 caliber Leman with flintlock ignition. Now, let's consider this as a brand new rifle with sights the way they come from the TVM shop. Also, for now, let's say that we already have all the things we need to shoot this new rifle such as a sharp flint, the proper size balls, patches, a good horn full of powder and a powder measure that allows us an appropriate powder charge. In other words, we have all we need to so some good shooting with this new TVM rifle.

The things we need for sighting-in this rifle are in addition to our shooting gear. We'll be needing at least two files for cutting the notch in the rear sight and for lowering the front sight, a hammer and a brass drift for moving the sights right or left, and a sturdy benchrest. These few things should be considered minimum for sighting-in.

Now, one of the things that makes a traditional rifle, in addition to its design, is its non-adjustable sights. The term "non-adjustable" is somewhat misleading because these sights can certainly be adjusted. Non-adjustable traditional sights actually have advantages, because when they are sighted-in, they are usually sighted-in for keeps.

Before going to the benchrest to do the shooting with our new rifle, or an old rifle with new sights, give some attention to the sights themselves. All accurate shooting with a rifle depends mainly on the sights.

Make sure the rear sight has a good notch in it, something you can aim through very clearly. Usually the rear sight on a new TVM rifle has no notch filed in it, we must do that ourselves. For cutting that notch, I like to use a small knife-file, a file with a very narrow edge. While cutting the notch, I always work from the front of the sight to the rear so the notch is slightly deeper at the front. We're talking about a very small dimension, true, but if the front of the sight's notch is equal to or slightly higher than the back, you can actually see both surfaces while aiming. Even more important is the top of the rear sight notch, be sure that the line at the top of the notch is higher toward the back.

If the sight's notch appears fuzzy or if you think you can see two of them, you'll never shoot well with that sight. File the notches so your eye sees only the back of the rear sight, seeing nothing in the notch, only aiming through the notch. If the notch is not as deep as you like, file it deeper. If the notch is not wide enough to see the entire width of the front sight, widen the notch. The point is this; you must be satisfied with the rear sight, satisfied to the point that you can use it quickly, correctly, and accurately.

Front sights need attention too but let's talk just for a moment about selection. Target shooters often demand a black front sight so deceiving light reflections are kept to a minimum; keeping their groups and scores as good as can be. Hunters usually want a brighter front sight that stands out in the shadows while hunting in the dark woods, so the sight will stand out against the darker background of the game. My choice is a traditional silver blade front sight, often in a copper base. Silver is always visible and when filed squarely, not rounded at the back, misleading light reflections are generally few. For a listing of a wide variety of both front and rear sights for traditional muzzleloading rifles, send \$7 to get a catalog well stocked with gun parts from, Track Of The Wolf, Box 6, Osseo, Minnesota 55369.

Now, let's check the sight on this TVM Leman. Remember, we're not just going shooting or testing our shooting skills, we want to sight-in the rifle. So, the rifle must be rested across something that holds it very firmly. The best thing to do is to shoot from a sturdy shooting bench. Rest the forearm over some sandbags or some padding that's very firm, don't hold the rifle's forearm and rest you elbows on the bench. In other words, don't try to hold the rifle, let the bench support the rifle and you too. Shooting practice can come later, right now the rifle must be immobilized as much as possible until the alignment of the sights is set.

For the first shots, let's post a target at only 25 yards away. There is a lot that can be done at this short range. We'll want our rifle sighted-in at longer ranges too but we'll switch to longer range targets after finding out what the rifle is doing at 25 yards. We also want a rather large target to post at

25 yards because at this time we have no idea where the rifle will be shooting.

Those first shots can be taken with 50 grains of FFFg under a .490" ball and wrapped in a .015" patch. Fire at least three shots to get a real good idea about where the rifle is hitting. You should never base fine adjustments of rifle sights on just one shot. Always fire for a group and then base your sight adjustments on the center of the group. With this Leman our first three shots went slightly to the right.

At this point the sights can be examined to see which one would be moved. I like to have my rifle's sights as close to the middle of the barrel as possible. We'll say the front sight can be moved slightly to the right to center it and that is also the adjustment needed to bring the bullet's impact to the center of our target. Scratch a very small index mark beside the sight on the barrel, using the tip of a knife blade, so the amount of sight movement can be seen. Without an index mark there often is no way to tell how far the sight moves, especially for small adjustments. Then tap the front sight to the right. That will hide the index mark because it will be covered by the sight blade.

Remember, you move the rear sight in the same direction that you want the bullet's impact to go and the front sight is moved in the opposite direction for windage adjustments.

We can often make our windage adjustments too much, moving the sight too far. If we are satisfied that the front sight is centered, we can go to the rear sight for further adjustments, as the location of our groups on the paper will show. Perhaps our next shot with the Leman suggests that we moved the sight too far. That happened to me but a couple of more shots were fired and they went right where they were supposed to go. Like I said, don't ever base sight adjustments on just one shot.

If the shots are impacting the target high, we can either lower the rear sight by cutting it down with a file, or changing the rear sight by replacing it with a new lower sight, or by replacing the front sight with a taller blade. Filing down the rear sight has disadvantages because it can change the shooter's sight picture. And, reducing the height of the rear sight with a small file takes a lot of time.

Having the rifle shoot low is much more common because most front sights are too high. The easiest adjustment to make is filing down the front sight. You want to do this slowly and evenly to be sure the sight still has a flat top so your sight picture will not favor one side of the sight over the other. Also, always file the top of the front sight from the front, so the tallest part of the sight blade is to the rear. We'll need to take several shots as the height of the sight is reduced in order to keep tabs on our progress. Shortening a front sight too much is something we certainly don't want.

With the sights adjusted, this new Leman .50 is sending the balls right into the center at 25 yards while using 50 grains of powder. Now we can check the rifle more with a target at 50 yards, and increase the powder charge to 60 grains. If this new gun is like some of mine, we should still be right in the middle. In competitive shooting, where I like to maintain the same sight picture at various distances, the powder charge in my .50s is increased again to 80 grains for 100 yard targets. The 80 grain load has proved to be very successful both on paper at 100 yards and for making meat during deer season with .50 caliber rifles.

To add just a little more detail to the front sight, I like to file a short 45-degree slope to the back of the sight, right at the top. This gathers a lot of light so the front sight can be seen in the darkest timber. To my eye this looks like a bright bead and it seems to remain visible at all light levels.

Now that .50 Leman is sighted-in. Getting a rifle to shoot center is no problem where sight adjustment is concerned, it just takes some tools and a little serious shoot to do so. A lot of us, including me, favor traditional sights over the quickly adjustable rifle sights because the non-adjustable sights

don't go out of alignment very easily. Remember, traditional style rifle sights are simply that, traditional in style, they are certainly not out of style.

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Well, our fire is burning low and it's time for us to put it out, spread the ashes, and watch our backtrails well enough that we can meet here again in two moons. I really want to know what you think of this little campfire as well as what subjects you'd like to see covered as we talk about such doin's. So, if you feel like giving me some pointers, drop me a line or note at P.O. Box 2913, Olympia, Washington 98507. For now, keep plenty of powder in your horn and shoot sharp's the word.

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