

FIG. 1  
SETTING 1.25°

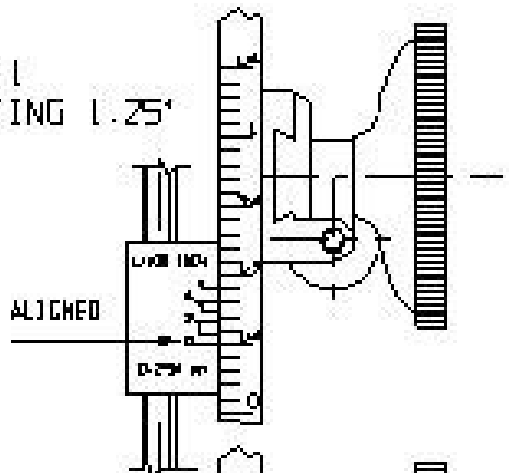


FIG. 2  
SETTING 1.26°

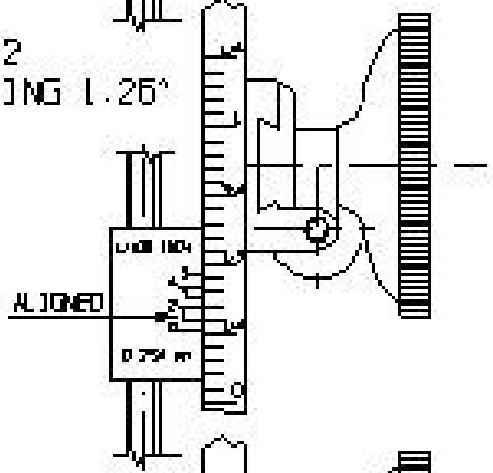
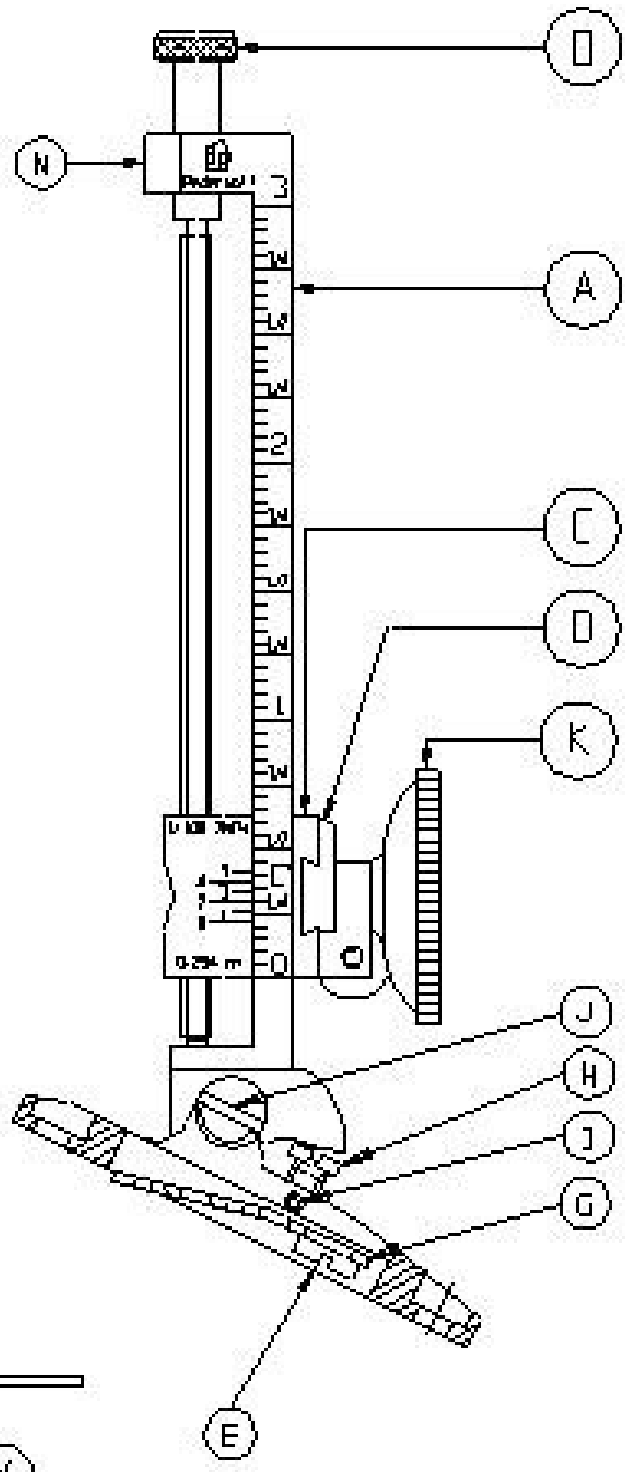
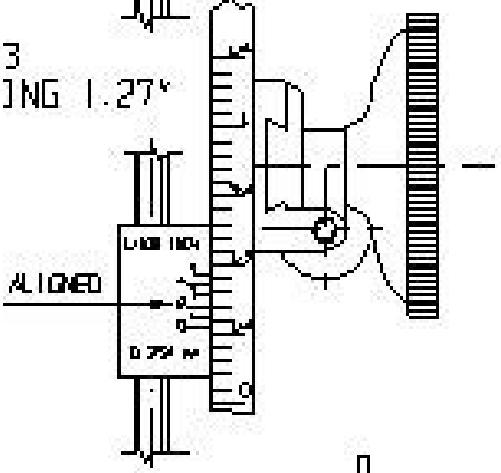


FIG. 3  
SETTING 1.27°





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# CREEDMOOR SIGHTS mod. usa 446

## INSTALLATION ON YOUR RIFLE

Your Pedersoli Gibbs tang sight is provided with two mounting holes in the base plate (G). The hole spacing is between 39.49mm (1.55") and 43.40mm (1.70"). Two sight mounting screws M.35/Ø 3.5mm/P 0.6mm are supplied for use on Pedersoli Gibbs muzzleloading rifle.

It is important that the tang sight stand vertically, both in side view as well as from a rear view. This must be checked with a suitable carpenter's or machinist's bubble level. Mount the rifle in a padded bench vise and use a level to position the breech sides vertically and the barrel horizontally (make allowance for barrel taper if necessary). Loosening side screw (I) using the proper wrench (Y) will allow the screw (H) to be tightened or un-tightened until the staff (A) is vertical from a side view.

Should you need a longer screw (H) it has to be Ø 3.5mm P. 0.6mm. Finally tighten screw (I) to avoid any moving of screw (H).

To position the staff vertically when viewed from the rear, it will be necessary to insert suitable metal, hard paper or plastic shim material under one side or the other as necessary. Use the bubble level to verify that you have obtained good vertical positioning.

When you are satisfied with the installation, tighten screw (J) to apply enough drag on the pivot joint so that when the rifle is fired the staff assembly will tip forward only a small amount or not at all. Avoid excessive tightening.

## USING THE ELEVATION SCALE & VERNIER SCALE

(It is necessary to loosen the eye cup (K) when making any adjustment. Use moderate pressure when retightening the eye cup).

The staff (A) is marked from zero to three inches with 20 lines per inch and each line equals .05" (see "Using Minutes of Angles & Sight Scale" section for further data). With the popular 30" barrel length, each .01" of elevation change equals 1.0 Minute of Angle (MOA) and at 100 yards one MOA 1.0" and at 200 yards one MOA=2.0" and so on for other hundred yard increases in distance.

The .05" lines therefore equal 5.0 MOA or 5.0" at 100 yards and 10.0" at 200 yards and so forth for longer distances.

The vernier scale (B) has 5 spaces, each one being .04" apart and this provides a way to divide each .05" space into 5 spaces of .01" each, thereby making it possible to control elevation settings by .01" increments. Vernier figure #1 shows a setting of exactly 1.25" (1¼") of elevation and figure #2 shows the number one vernier line raised until the very first staff it can align with this in alignment. This setting adds .01" to the basic 1.25" starting setting and the new setting is therefore 1.25" plus .01" (1.26"). Vernier figure #3 shows the 2<sup>nd</sup> vernier line in alignment with the second staff line it can align with and this setting is therefore 1.25" plus .02" (1.27").

This same system is used for the 3<sup>rd</sup> and 4<sup>th</sup> vernier lines which add .03" and .04" to the starting setting. Note that when the 5<sup>th</sup> vernier line is brought into alignment with its staff line, the zero line on the vernier will also be in alignment with its staff line so

you be starting a new sequence of settings which will be .05" larger than where you started on the staff. The shooter can record elevation settings which were found correct for different ammunition loads and for various distances and return to these exact settings on another day, with full confidence in this Pedersoli made precision tang sight.

## **USING THE WINDAGE SCALE**

This tang sight has a windage scale to allow precision setting of available windage movement. This is particularly necessary when shooting with a brisk side wind moving the bullet quite a large amount left or right of center.

The windage scale (C) has 10 spaces, each one being .02" wide. Again, using the popular 30" barrel rifles as a standard reference, a movement of one full space provides a movement of 2.0 MOA, or 2.0 inches at 100 yards. A movement of two full spaces would provide 4.0 MOA or 4.0 inches at 100 yards. By estimating the center of each space the shooter can obtain 1.0 MOA changes.

Using knob (M), the moveable windage marker (D) can be positioned left or right of center on windage scale (C). The eye cup (K) must be loosened to allow this movement to be made and must retightened moderately after completing the setting.

If you have a Pedersoli adjustable front sight and you want to bring your rear tang sight back to a center position, move your front sight exactly the same amount the rear sight is off center. Moving the front sight to the left will move the POI to the right. Moving the front sight to the right will move the POI to the left. If you do this correctly you will end up being able to bring your rear sight back to its center position and your shots will strike in the target center. (If you do not have an adjustable front sight you can use a brass drift to move your front sight left or right and obtain the same results.) In the following two sections which explain Minutes of Angle (MOA) you will gain a clear understanding of how to use your Pedersoli tang sight.

## **USING MINUTES OF ANGLE (MOA) & SIGHT SCALES**

The lines on the elevation and windage scale are used to change where your bullet will hit and this is called "Point of Impact" (POI).

The distance between the front and rear sight aiming apertures is called the "sight radius". Measure this distance on your rifle and select from the list below, the distance which is close to your own sight radius.

<b>Distance between front and rear sights</b>	<b>Sight movement equals 1 MoA (Minute of Angle)</b>
32 inch radius	.009"
34 inch radius	.010"
36 inch radius	.010"
38.75 inch radius	.011"

(The above numbers are rounded off to a practical amount and the two .010" numbers are correct)

## **How to use minutes of angle to change point of impact (POI)**

One MOA is approximately equal to 1.0 inch at 100 yard, 2.0 inches at 200 and so on, for longer distances.

Use the "MOA in Inches" chart to see how one MOA changes at longer distances and remember that for your sight radius, the amount of movement needed for one MOA change remains the same for ALL DISTANCES.

Using the 30 inch barrel rifle having a sight radius of 34 inches as an example:

If the test target at 100 yards, shows bullets striking to the left of center by say 4 inches, you need to move the POI right by 4 MOA and this is  $4 \times .010" = .040"$  on the windage scale. Move the windage scale on (D) two marks to obtain the needed .040" movement. Elevation changes work the same way as described for windage.

Each space on scale (A) is .050" and this equals a movement of 5.0 MOA, which at 100 yards is 5.0 inches and at 200 yards is 10.0 inches and so on for longer distances.

Using the 34 inch sight radius shown in the example above, let us say your 100 yard shots were 5.0 inches below center.

You need to raise the POI 5.0 inches and at 100 yards that is exactly 5 MOA or  $5 \times 0.10'' = .050''$ . Since each line on scale (A) is  $.050''$  apart, we need to move the sight upward exactly one full space to obtain the required  $.050''$  movement. The vernier scale will allow you to refine these settings in  $.01''$  increments for more accurate small changes in POI.

### **CARE AND MAINTENANCE**

Your Pedersoli tang sight is a precision instrument and must be protected being struck or bent. After each shooting session, carefully wipe it to remove possible cleaning liquids and dirt. Apply a thin film of gun oil to all exterior surfaces to prevent rust formation. Check the two screws (N) at the top of the staff assembly. If set too tight they will cause a bind on the staff screw. Adjust to obtain a slight drag when the elevation knob (O) is turned. Because leather and trapped humidity can cause corrosion, we advise against storing the gun or sight in a leather case or a sealed container for an extended period of time.

### **MINUTES OF ANGLE IN INCHES FOR VARIOUS DISTANCE**

The data chart shown below is very useful when shooting in Silhouette or long range Creedmoor type matches. All the needed distances for both yards and meters are listed and the size of one MOA given, so your sight adjustments can be accurately made.

<b>Yards</b>	<b>Meters</b>	<b>MoA</b>	<b>Yards</b>	<b>Meters</b>	<b>MoA</b>
<b>100</b>	91	<b>1.04</b>	<b>700</b>	640	<b>7.33</b>
109	<b>100</b>	<b>1.08</b>	766	<b>700</b>	<b>7.56</b>
<b>200</b>	183	<b>2.09</b>	<b>800</b>	731	<b>8.37</b>
218	<b>200</b>	<b>2.16</b>	875	<b>800</b>	<b>8.64</b>
<b>300</b>	274	<b>3.14</b>	<b>900</b>	823	<b>9.42</b>
325	<b>300</b>	<b>3.25</b>	984	<b>900</b>	<b>9.72</b>
<b>400</b>	366	<b>4.19</b>	<b>1000</b>	914	<b>10.47</b>
417	385	4.36	1093	<b>1000</b>	<b>10.80</b>
433	<b>400</b>	<b>4.53</b>	1203	1100	11.88
<b>500</b>	457	<b>5.24</b>	1312	1200	12.96
541	<b>500</b>	<b>5.66</b>	1422	1300	14.04
<b>600</b>	549	<b>6.28</b>	1531	1400	15.12
656	<b>600</b>	<b>6.48</b>	1640	<b>1500</b>	<b>16.20</b>

(data is rounded to closest practical number)