### **PATTERN 21 SIGHT**

# Manufactured By: Providence Tool Company, LLC



THANK YOU for purchasing the best of the Old West Classic receiver (peep) sight, now being manufactured in the USA by Providence Tool Company. This superior aiming instrument is based on Lyman's 1895 Patent, which is commonly called the Model 21 sight. Original Lyman <sup>TM</sup> 21 sights are scarce and expensive, but you now have the opportunity to rediscover the great functionality and beauty of this elegant rifle accessory.

The Model 21 Sight was originally designed in 1895 as a replacement for the common sporting type tang sights to overcome serious tang sight shortcomings. One advantage of the Pattern 21 sight over common tang sights is that there is no longer a need to worry about positioning the sight based on the bolt travel on your rifle. By having the sight mounted on the receiver rather than farther back on the stock allows the shooter to properly grasp the rifle's grip for a safe correct hold while firing your rifle; also reducing the risk for potential eye damage. It also eliminates any stock damage caused by folding a tang sight repeatedly over time.

The Pattern 21 sight is designed with a wide range of adjustment whereas common sporting tang sights possess a limited range adjustment capability. A further advantage is the quicker elevation adjustment eliminating the need to fold a tang sight up, then making an adjustment.

The Pattern 21 sight is made from machined steel and brass components, entirely in the U.S.A. and is designed to operate on most models of Winchester and Marlin lever action rifles, as well as Peabody single shot rifles. The best part is that our Pattern 21 sight is priced competitively with American made sporting model tang sights.

Attached are instructions on how to properly install your sight on various rifles, and how to accomplish your initial sighting in.

Thank you and good luck shooting with your new Providence Tool Model 21 receiver sight. If you have any questions, feel free to e-mail or call.

### **Parts List**

1) Sight Body	1) Stud
1) Standard peep aperture (modified	2) Brass indicators (identical except for the
apertures sold separately)	thicknesses)
1) Locking lever	1) #11-36 Tap
1) Screw	1) #18 Tap drill

## Providence Tool Company Pattern 21 sight INSTALLATION INSTRUCTIONS

Please read and understand before installation. Providence Tool Company will not be liable for any damage to your rifle. Before you start installation, please make sure your rifle is **not loaded!** 

The Patten 21 sight is based on Lyman's 1895 sight and is installed on the left side of most lever action rifle receivers. It also fits the Peabody single shot rifle.

There are two variations of the Pattern 21 sight. The only difference between the two are the distances of the mounting holes. The Pattern 21 '86'- '95' sight is designed to fit the original Winchester models that were predrilled from the factory. Similarly, the Pattern 21 '92'- '94' sight is designed to fit the original models as well. Both variations are able to adapt to various models of lever action rifles; brand to brand, old or new.

Since the Pattern 21 sight was designed for the early model Winchesters, the screws, stud and tap supplied are of the original thread style as well (#11-36). With suppling this modernly uncommon hardware and tap with the sight kit, it allows for easy installing on original Winchester models without devaluing the rifle by having unused holes or adapting common style hardware to the rifle.

While the services of a gunsmith or machinist is recommended, the Pattern 21 sight can be installed by an experienced hobbyist. Knowledge of disassembly and assembly of your rifle is required for installation.

Installation of this sight will require the drilling and tapping of a maximum of two holes in the side of your receiver. Most lever action receivers are made from relatively soft steel and will not present a problem when drilling and tapping with standard high speed or carbon steel tooling. Some Winchester 1895's and early '86's has been known to be made of harder material, which will be difficult to drill and tap and may require carbide tools.

<u>Notice:</u> On both new and old rifles that have the #11-36 thread, it is recommended to use the supplied tap to re-tap the holes to insure the supplied hardware does not get damaged. Also, when laying out the location of the front screw hole on any rifle, make sure it is centered in the elongated slot on the sight. This insures there is no binding when adjusting for elevation.

### **Locating and Drilling mounting holes**

Winchester '92's, '94's, and most Marlins: Disassemble the rifle so there isn't any obstruction for drilling holes in the receiver. Installation utilizes the existing hole on the rear of the receiver. If the hole is a different size other than #11-36, re-drilling and tapping will be necessary. Install the stud and mock install the sight body. For Winchester '92's and '94's, position the center of the front slot .450" from the top of the receiver. For Marlin rifles, position the slot .525" from the top. For Winchester '92's, use caution, the front hole will be drilled into the receiver and into the barrel threads. Do not drill deeper that .200". Mark the position in the center of the slot with a transfer or regular punch. Remove the sight body and drill and tap your marked position. Reapply the sight body and install front screw. Install indicator and locking lever described in the indicator portion of instructions, then reassembly the rifle.

Winchester '95's: Disassemble the rifle so there isn't any obstruction for drilling holes in the receiver. Installation utilizes the existing bolt/lever pin access hole on the front of the receiver. If the hole is a different size other than #11-36, re-drilling and tapping will be necessary. Install the screw and mock install the sight body. Position the sight body so the top sight bar, with the peep on, clears the bolt by .015" (about the thickness of a business card). Mark the position for the rear stud hole at the top of the elevation slot with a transfer or regular punch. Remove the sight body and drill and tap your marked position. Reapply the sight body and install rear stud. Install indicator and locking lever described in the indicator portion of instructions, then reassembly the rifle.

Winchester 1886: Disassemble the rifle so there isn't any obstruction for drilling holes in the receiver. On the left side of the receiver drill and tap the front screw hole 1.2" back from the receiver ring front and .460" down from the top. Install the screw and mock install the sight body. Position the sight body so the top sight bar, with the peep on, clears the bolt by .015" (about the thickness of a business card). Mark the position for the rear stud hole at the top of the elevation slot with a transfer or regular punch. Remove the sight body and drill and tap your marked position. Reapply the sight body and install rear stud. Install indicator and locking lever described in the indicator portion of instructions, then reassembly the rifle.

#### **Installation Continued**

<u>Trim off the screw and stud shanks:</u> The sight mounting studs are manufactured long enough to fit a variety of receivers. Grinding and fitting may be needed to insure sufficient clearance for the bolt to fit back into the receiver. It is also recommended to use a thread locking solution when you reach the final installation of the both the screw and stud. LOCK-TITE 262 or 271 is recommended for best results.

Fitting the pointer and timing your locking lever: The Pattern 21 sight kit is supplied with two elevation indicators: one is .032" and the other is .050" thick. The purpose of this is for timing or "clocking" the locking lever. For installation, start with the .032" thick indicator. Bend the indicator tab at a right angle with the face of the indicator. A vice with a hammer and flat punch is recommended. While bending the indicator, arrow on your right, the tab will be bend away from you. The tab is made larger for bending purposes. It is recommended to grind or file to a height of .45". Install the .032" indicator making sure it rides smoothly in the sight body's vertical slot. Then install the locking lever and tighten the lever with moderate pressure. The locking lever, ideally, should be pointed toward the butt of the rifle so you can tighten it with downward thumb pressure. If it is and is to your preference, installation is done. If the locking lever points forward or in a position not to your preference, remove the locking lever and .032" indicator. The .050" indicator will now need to be bent, fitted and installed. After bending the indicator tab, grind or file the tab to the .032" thickness. Install the indicator and locking lever. The lever should now be pointed rearward or differently than before.

**Aperture peep:** Pattern 21 sight kits are supplied with standard apertures with a .07" diameter peep hole. Other apertures are sold separately upon request. Common requests are for a larger peep hole to be drilled, and the aperture to be drilled and tapped to accommodate sight disks.

<u>Troubleshooting and fine tuning:</u> After installation you may find the sight might be binding. Some of the common issues, being the sight can be installed on a great variety of rifles, is domed screw heads protruding causing the sight not to sit flat on the receiver when tightened. Filing or grinding the domed head of the screw will be necessary. If there is any binding when the sight is elevated, it might be necessary to grind or file the elongated slot in the front for more travel.

Sighting in you rifle: Make sure the aperture is approximately centered on the sight bar using a small screwdriver to adjust as needed. Using appropriate safety gear and measures at a rifle range, start at the 25-yard mark. Using a large target and a rest, fire one round and note its location. If the bullet hole is left of center, move the aperture slightly to the right and vice versa. Repeat this until the bullets fall into the center of the target. For elevation, position the sight to the lowest marked position. Fire one round and if your bullet is hitting high on the target you will need to install a higher front sight. This is no different than sighting in any other type of iron sight, open or peep. For longer range shooting, test at a known distance and mark what line corresponds to that distance. Some suggestions are to count from the top, use a punch, or highlight the line with whiteout or paint marker.

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