

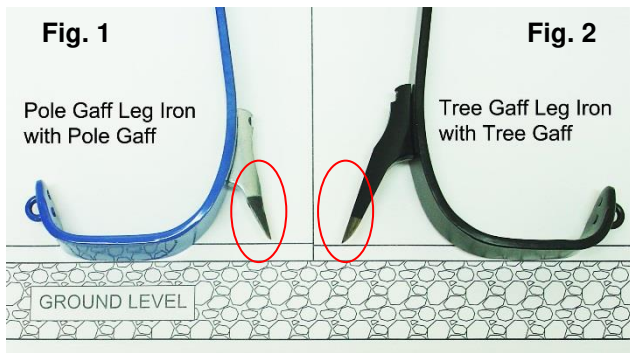
# BUCKINGHAM MFG.

## \*\* IMPORTANT INFORMATION \*\* CLIMBERS (Aluminum / Steel / Titanium)

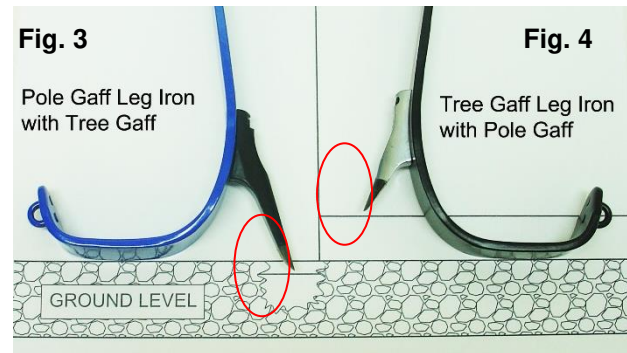
### READ CAREFULLY

- Buckingham climbers are not intended for, and not to be used by, individuals not properly trained. Use by such persons could cause a fall and result in serious injury or death.
- This product is designed to be used by a person with a maximum weight of 350 lbs. when fully equipped.
- Proper fit of the climber requires that the leg iron, with pad attached, extend from the instep to about ½" below the bottom of the inside projection of the knee joint.
- Buckingham climbers are manufactured in accordance to the ASTM F887 standard.
- Climbers are designed and intended to be used for ascending, descending, and maintaining the working position on poles or trees. Kicking or jamming gaffs into a pole or tree should be avoided. When descending, do not take long steps, jump or try to coast or slide, as this could shorten product use life or may cause the climber to break which may result in a fall leading to serious injury or death.
- Buckingham recommends completing the plane and pole cut out test defined by the ASTM F887 standard when climbers are first received, and whenever gaffs have been maintained. Also as stated in OSHA 1910.268 (g)(2)(iii) a gaff cut-out test shall be performed at least weekly when in use.
- The point of the gaff should function as a chisel, cutting its way into the pole or tree. It should not have to be driven like a spike or needle. Spike or needle pointed gaffs, due to the reduction in cross-sectional area, may break or cause you to cut-out and may result in a fall and cause serious injury or death.
- Pole climbers have relatively short gaffs (approx. 1-1/2 inches). Tree climbers have relatively long gaffs (approx. 3-1/2 inches for permanent gaff type, approx. 2-1/2 inches for replaceable gaff type) so they can penetrate tree bark and reach solid trunk wood.
- Gaff lengths when measured on the underside must not be less than 1-1/4" for pole gaffs (OSHA 1910.268(g)(2)(i) or 2 1/4" for tree gaffs.
- Buckingham Mfg. understands that under certain circumstances, pole gaffs are used to climb trees. These circumstances should be limited to climbing thin bark hardwoods such as Maple, Beech, Dead wood, or while working near the top of a tree where the bark has a tendency to be thinner. Only replaceable pole gaffs should be used on trees as they have a slightly longer length and greater projection from the climber shank than the permanent pole gaff. Use extreme caution while using replaceable pole gaffs on trees.
- The gaff attachment location of the leg iron is dependent on whether a pole or tree climber as shown in Fig. 1 & 2. If you have a Pole Gaff Leg Iron and replace the Pole Gaff with a Tree Gaff, the tip of gaff will be below the stirrup as shown in Fig. 3. If you have a Tree Gaff Leg Iron and replace the Tree Gaff with a Pole Gaff, the tip of gaff will be slightly higher than that of a standard Pole Gaff Leg Iron as shown in Fig. 4.

### STANDARD GAFF POSITIONS



### INTERCHANGED GAFF POSITIONS



- Wear high quality climbing boots which are specifically designed for climbing application.
- Adjust climber straps securely for optimum fit around your feet and legs. Straps should be snug but never so tight as to restrict circulation.
- When climbers are not in use, place gaff guards over the gaff points to protect equipment and the handler (OSHA 1910.268(g)(2)(i)).
- Store climbers separately from other climbing equipment.
- This equipment should be a personal issue to the employee using it.
- Keep climber sets together. Fasten them together when they are stored or transported. Never climb with a mix matched set of climbers.
- Carry the climbers to the base of the pole or tree. Remove the gaff guards from the climbers and place them near the base of the pole or tree for attachment. After dismounting, immediately remove your climbers and place gaff guards over the gaffs. To minimize the danger of personal injury and / or damage to the equipment, never walk around while wearing climbers.
- Pole climbers may not be worn when working on ladders, in aerial lifts, while driving a vehicle or walking on rocky, hard, frozen, brushy or hilly terrain (OSHA 1910.268(g)(2)(iv)).
- Do not paint climbers. Paint can hide defects that can cause premature failure.

The care, inspection, and proper use of safety equipment is the responsibility of you, the user, therefore:

- ◆ Take proper care of your equipment at all times.
- ◆ Use equipment for its intended purpose only.
- ◆ Properly dispose of equipment unsafe for use.

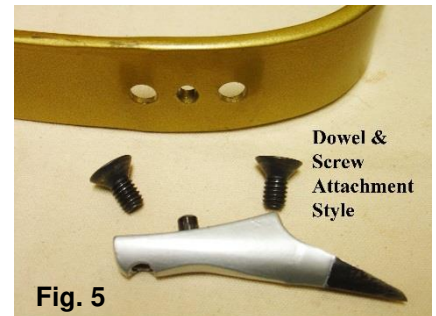
- Fall protection equipment, (i.e. fall arrest, work positioning belts, climbers, retrieval, suspension etc.) should not be resold or provided to others for re-use after use by original user, as assurance cannot be granted that a used product meets criteria of applicable standards and is safe for use to a subsequent user.
- Ensure proper fit / size of product before use. This product cannot be returned unless it is in new / unused condition. Unauthorized modifications to the climbers such as but not limited to drilling, bending, twisting, etching, or scribing may reduce climber strength causing fracture or breakage. Therefore, product that has been modified or altered by customer misuse cannot be returned.

### **CLIMBERS WITH DOWEL & SCREW ATTACHMENT GAFFS (MANUFACTURE DATE OF 01/11 AND AFTER):**

Dowel & screw attachment style (Fig. 5) consists of three circular holes in the leg iron. The top and bottom holes are used for the gaff attachment screws and the center hole for the gaff dowel. This style is supplied with two 5/16"-18 x 5/8" long gaff attachment screws for steel and titanium climbers and 5/16"-18 x 7/8" long gaff attachment screws for aluminum climbers. Gaff screws for steel & titanium versus aluminum climbers are not interchangeable.

Note: Ensure the Gaff dowel is securely seated in gaff prior to attaching to leg iron.

Hand tighten the bottom gaff screw (nearest the gaff tip). Repeat hand tightening on the top gaff screw. Tighten using a 3/16" x 4" length Allen wrench (with maximum torque to achieve complete and maximum tightness, this method can yield Buckingham's 235 inch pound tightening recommendation for these screws). Note: use of a longer wrench can yield results exceeding the 235 inch pound recommendation and result in stripping and / or fracture of the screw head. Visually inspect to ensure screw heads are flush with the inside surface of the climber leg iron. Gaff attachment screws should be replaced after the first time removed, but if re-using, apply a low to medium strength thread sealant (Loctite® or equivalent) to prevent the screws from loosening. Screws may not be removable if a permanent type thread sealant is used.



**Fig. 5**

### **CLIMBERS WITH SCREW ATTACHMENT GAFF (MANUFACTURE DATE OF 12/10 AND BEFORE):**

Screw attachment style (Fig. 6) consists of a rectangular slot and one circular gaff screw hole in the leg iron. This style is supplied with two 1/4" -20 gaff screws.

Hand tighten the bottom gaff screw (nearest the gaff tip). Repeat hand tightening on the top gaff screw. Tighten using a 5/32" x 2 3/4" length Allen wrench (with maximum torque to achieve complete and maximum tightness, this method can yield Buckingham's 136 inch pound tightening recommendation for these screws). Note: use of a longer wrench can yield results exceeding the 136 inch pound recommendation and result in stripping and / or fracture of the screw head. Visually inspect to ensure screw heads are flush with the inside surface of the climber leg iron. Gaff attachment screws should be replaced after the first time removed, but if re-using, apply a low to medium strength thread sealant (Loctite® or equivalent) to prevent the screws from loosening. Screws may not be removable if a permanent type thread sealant is used.



**Fig. 6**

If you require additional instructions or should questions arise concerning the proper use or condition of your equipment, contact Buckingham Manufacturing Co. at 1-800-937-2825.

### **INSPECTION:**

Leg irons and gaffs must be inspected, maintained, and replaced by the user at regular intervals. This interval should be dictated by the amount of use the product receives rather than a set time frame. Therefore Buckingham does not place a time limit on these operations. Due to the rigorous strain leg irons and gaffs endure, inspection is extremely important.

Climbers (pole and tree) must have properly shaped gaffs. Never file the gaff to a needlepoint. When necessary to shape the gaff, it should be filed lengthwise on the flat underside. Crosswise file marks on a gaff cause stress risers, weaken the steel, and may result in a broken gaff. Never file on the beehive (rounded) side of a gaff, this will result in a mis-shaped gaff. Use a honing stone to repair minimal damage to the gaff (gaffs are nicked or damaged from contact with nails or pole hardware).

An improperly shaped gaff can cause cut-out, a fall, and serious injury or death. Use Buckingham gaff gauges as follows:

- P/N 6303 for all pole climbers with standard and CCA Gaffs.
- P/N 6306 for all climbers with tree gaffs.

Complete gaff maintenance kits are also available (P/N 6025 for standard pole and CCA gaffs. P/N 6026 for tree gaffs).

Note: Buckingham gaffs from the tip to approximately 1" up the gaff are coated with a rust inhibitor, as opposed to powder coating used on the remainder of the gaff, to aid in gaff penetration and proper gauging. The gaff gauge is recommended for use to check the gaff anytime other damage and / or excessive wear is suspected.

Climbers should be checked for but not be limited to the following before each use:

- Gaffs are not loose, cracked, or broken.
- Leg irons are not cracked, damaged and/or exhibit burn marks.
- Gaffs are properly attached to the climber leg iron using appropriate hardware.
- Gaff dowel is in place and properly seated in leg iron.
- Both gaff attachment screws are in place and are properly tightened.
- Climber straps are properly attached, are in good condition and as a minimum, do not have cuts, kinks, abrasions, burns, excessive swelling, excessive wear, discoloration, charring, broken fibers, loose stitching, elongated holes, loose or damaged buckles or rivets or chemical or physical exposures, etc.

- Climber pads are properly attached and in good condition, have no broken stitching, rivets, or loops. If equipped with hook and loop style pads ensure that the hook and loop is not worn or excessively dirty and that it properly adheres to itself.
- Sleeves are properly attached to the climber leg iron with the two barrel nuts and fasteners provided with the climber, are not cracked, or have broken or bent strap loops.
- Sleeves are adjusted for proper climber fit and are secured to the climber leg iron.
- Gaff length, width, thickness, point profile, and sharpness of cutting edges should be inspected with appropriate gauges which are available from Buckingham.
- Leg iron stirrup width & thickness for steel & titanium should be inspected using the appropriate 6303 gauge. For aluminum, if the stirrup section is worn so severe that the worn surface reaches the wear band (see Fig 7), these climbers must be destroyed and replaced with new.

As a general rule, assuming all inspection criteria is met, Buckingham recommends that all replaceable gaff climbers be replaced when the original gaff and one replacement set of gaffs have been worn out from normal use.

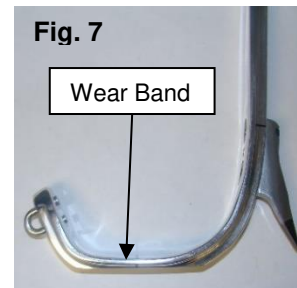
Leg irons should be replaced and gaffs should be maintained or replaced at the earliest signs of wear.

If any evidence of excessive wear or deterioration as outlined is observed, immediately cease use, destroy the product, and replace it with new equipment. Should any unusual conditions not outlined above be observed, or you have reasonable doubt about a particular condition, remove the equipment from service and notify your Supervisor, Safety Director, or contact Buckingham Mfg. (1-800-937-2825) for clarification.

Failure to carefully and completely inspect your equipment could result in serious injury or death.

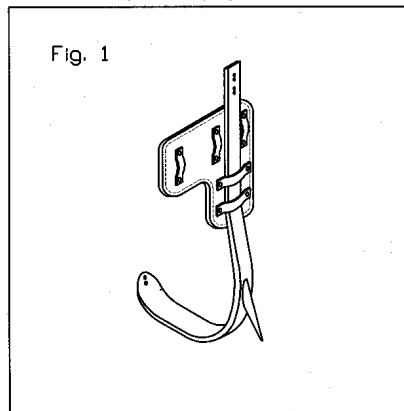
### CLIMBER ASSEMBLY PAD ATTACHMENT:

Notes: Leg iron and pads are marked 'L' and 'R'. Ensure you attach the left side pad to left side leg iron and right side pad to right side leg iron. When assembling climbers to pads; because climber pad shank slots are made for a snug fit, twisting the shank on an angle will ease the climber shank into the shank slot of the pad.

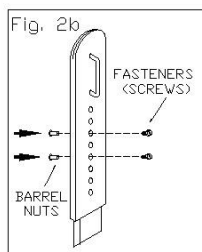
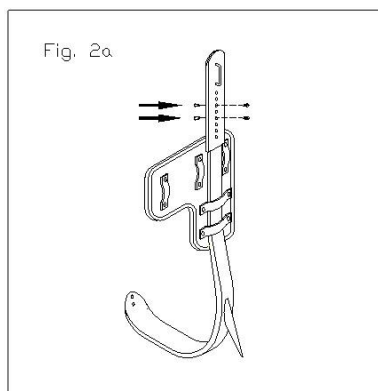


### LOOP STYLE PAD

Insert 'Loop Style' pad over shank of climber as shown in figure 1 ('right' climber shown).

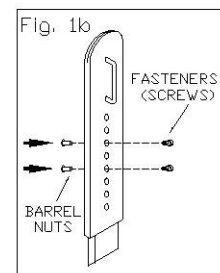
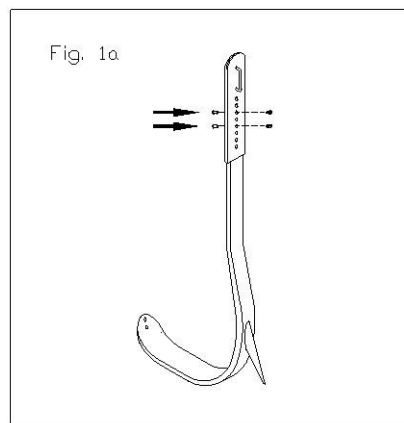


Attach sleeve to leg iron with sleeve loop facing outside of pad (away from the wearer's leg) using the fasteners enclosed. Insert barrel nuts from inside of leg iron. See Fig. 2a & 2b ('right' climber shown). **Note:** Two fasteners (screws, star washers & barrel nuts) must be used to secure each sleeve to each leg iron. Do not over tighten, torque to 25 inch pounds maximum.

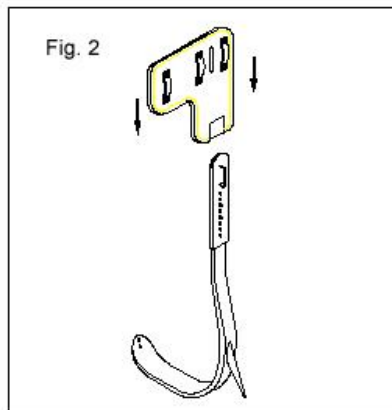


### TUNNEL STYLE PAD

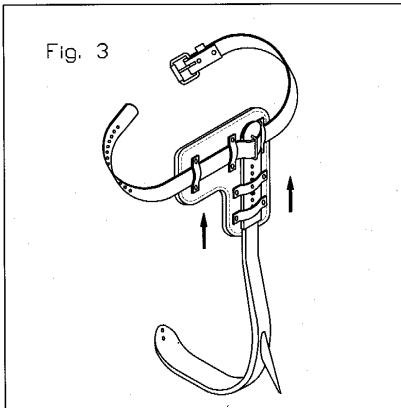
Attach sleeve to leg iron with sleeve loop facing outside of pad (away from the wearer's leg) using the fasteners enclosed. Insert barrel nuts from inside of leg iron. See Fig. 1a & 1b ('right' climber shown). **Note:** Two fasteners (screws, star washers & barrel nuts) must be used to secure each sleeve to each leg iron. Do not over tighten, torque to 25 inch pounds maximum.



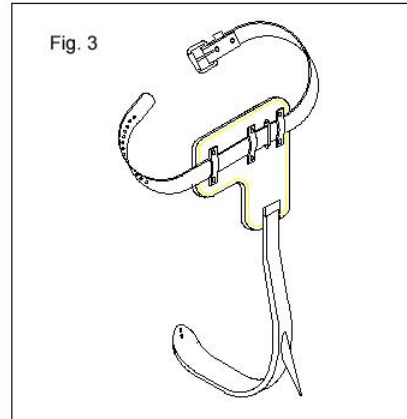
Insert 'Tunnel Style' pad over climber sleeve as shown in figure 2 ('right' climber shown).



Slide the climber pad along the climber sleeve onto the climber, aligning the sleeve loop with the loops on the horizontal leg of the pad. Insert climber strap in the direction shown, through the pad loops and the climber sleeve loop. See Fig. 3 ('right' climber shown). Note: Foot strap must be attached to the leg iron stirrup in the same direction as shown for the calf strap.



Slide the climber pad along the shank of the climber onto the sleeve, aligning the sleeve loop with the loops on the horizontal leg of the pad. Insert climber strap in the direction shown, through the pad loops and the climber sleeve loop. See Fig. 3 ('right' climber shown). Note: Foot strap must be attached to the leg iron stirrup in the same direction as shown for the calf strap.



### **FOOTSTRAPS:**

Buckingham climbers are sold with and without various style footstraps attached to the climber. See appropriate climber footstrap instructions for climbers supplied without attached footstraps.

### **WARNINGS:**

- Completely read, understand, and follow all instructions, warnings, and guidelines pertaining to this and all associated equipment before use. Failure to do so could result in your serious injury or death.
- Buckingham climbers are not intended for, and not to be used by, individuals not properly trained. Use by such persons could cause a fall and result in serious injury or death.
- Only Buckingham Mfg. Co. or those people authorized in writing by Buckingham Mfg. Co. may make additions, alterations, modifications or repairs to this equipment.
- Buckingham Mfg. Co. prohibits the use of aftermarket components such as, but not limited to rope ascenders, replacement screws, etc. being used with Buckingham climbers.
- Buckingham climbers must not be drilled, tapped, riveted, bonded, welded or have any other means of attachment performed to or on the climber under any circumstance. Such modifications or use of aftermarket components shall void any and all warranties. Buckingham Mfg. Co. shall be held harmless for any injuries or deaths that may result from the use of such modified climbers or aftermarket components.
- Do not bend, etch, or scribe any component of the climber.
- Field modifications to the climbers, such as but not limited to, bending or twisting may reduce climber strength causing premature fracture or breakage. Therefore any climber that has been permanently deformed, must not be re-straightened, but immediately removed from service.
- Marking from etching or scribing could cause the climber to break at the marked point. If this condition exists immediately remove climber from service.
- Climber accessories must be in good condition. Material shall be kept clean and leather shall be properly oiled. Climbing equipment that shows signs of excessive wear, or cracking of components, should be immediately discarded.
- Sleeves must be properly attached to the climber leg iron using appropriate hardware (screw fastener, star washer and barrel nut) and two points of attachment. Tighten sleeve screw fasteners until snug. Do not over tighten, torque to 25 inch pounds maximum.
- No equipment lasts forever. Therefore, should you have any doubt about the safety of your equipment, replace it.
- Remove any climber from service that has come into contact with an electrical arc.
- Do not use aluminum alloy climbers with climbing boots that have a steel heel guard. The heel guard wears deeply into the stirrup of the climber and will require premature replacement of the leg irons

Patented, for more information, visit [BuckinghamMFG.com/Patents](http://BuckinghamMFG.com/Patents).

**BUCKINGHAM MFG. CO.**  
BINGHAMTON, NY  
[www.buckinghammfg.com](http://www.buckinghammfg.com)  
1-800-937-2825