Published in Knotting Matters, the Journal of the International Guild of Knot Tyers, Issue 85, pp10-12, December 2004

The Vice Versa Bend and the Reever Knot
by Dick Clements

In his chapter ***A History of Life Support Knots*** in ***The History and Science of Knots*** (J C Turner and P van de Griend, World Scientific, 1996), Charles Warner draws attention to a paper ***Knots for Climbers*** by C E I Wright and J E Magowan which appeared in volume 40 of the Alpine Journal in 1928. One of the bends featured in this paper, and recommended for joining two ropes, is described as the Reever Knot. Study of the photograph of the knot shows that it is identical to the Vice Versa bend described by Miles in his book ***Symmetric Bends*** (World Scientific, 1995) and shown in figure 1. Miles shows the Vice Versa as a lanyard bend (by which Miles denotes a knot in which " two ends of equal status emerge from the knot in each of two opposite directions") and credits its invention to Harry Asher. Asher does indeed show a version of the Vice Versa bend in his book ***The Alternative Knot Book*** (Adlard Coles, 1989) and annotates it as a 'new' knot. Budworth, in ***The Book of Practical Knots*** (Adlard Coles Nautical, 2000), also shows the Vice Versa bend and credits its invention to Asher.

Figure 1

Being a lanyard bend there is no obvious choice of which ends of the Vice Versa should be the standing parts and which the working ends. In figure 1 the corresponding ends of the two cords making up the symmetric bend are labelled A and B. When the bend is used to join two ropes, in order to maintain the symmetry it is necessary to choose either both ends A or both ends B as the standing parts. Interestingly Asher (and subsequently Budworth) illustrate the Vice Versa Bend with one A-end and one B-end chosen as standing parts. So Asher's variant of the Vice Versa is, in this sense, not strictly a symmetric bend. Asher's choice however is possibly understandable because it allows the two standing parts to emerge from the same side of the knot structure. But Wright and Magowan show the Reever Knot with both A-ends as the standing parts. Figures 2a and 2b show the two symmetric variants of the Vice Versa Bend, the first variant, figure 2a, being the version illustrated by Wright and Magowan.

Figure 2a

Figure 2b

If a bend is to be useful and usable it is necessary that there should be a fairly simple and easily memorable method to tie it. Both of the variants of the Vice Versa bend shown can be tied fairly simply.

To tie the first variant start as for a Reef Knot, by taking one cord in each hand and making an anti-clockwise turn of one cord around the other as shown by the solid lines in figure 3a.

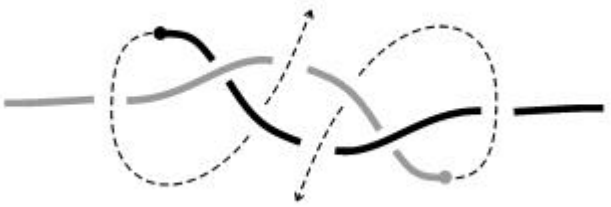

Figure 3a

Then, as shown by the dotted lines, pass each working end over the opposite standing part and up through the central space formed by the first turn giving the form shown by the solid lines in figure 3b (at this point we have, in fact, tied a Double Harness Bend).

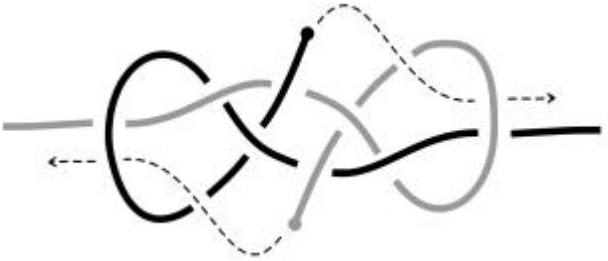

Figure 3b

To complete the Reever Knot tuck the two working ends through the end loops parallel to their own standing parts as indicated by the dotted lines in figure 3b. The completed knot in figure 3b is the knot in figure 2a viewed from the other side.

To tie the second variant of the Reever Knot start with an anticlockwise (lefthanded) Whatnot (figure 4a) and rearrange it into the form of figure 4b. Now take the two loops in figure 4b, one in each hand, and rotate each anticlockwise through 180° about the longitudinal axis of the knot to obtain the configuration shown in figure 4c. Finally tuck the working ends through the end loops parallel to their own standing parts again as indicated in the figure.

Figure 4a

Figure 4b

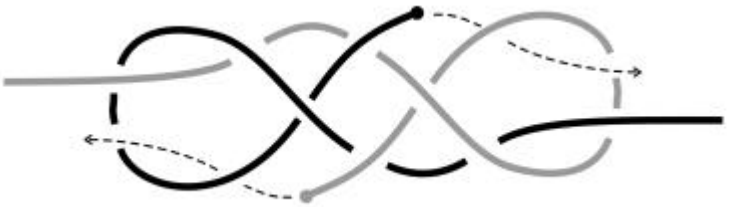

Figure 4c

Both variants of the Reever Knot can be worked up tight and secure by pulling alternately on the two standing parts and the two working ends. Which variant of the knot is the better? Informal testing in a variety of cord and moderate sized rope suggests that both variants are quite secure (that is proof against working loose when subject to intermittent loads). It is my strong suspicion that the first variant, as recommended by Wright and Magowan, would be the stronger in the sense of causing the least reduction of strength of the ropes joined. This belief is based on the relatively straight run of the standing parts into the bend and modest curvature of the standing parts at the entry to the bend. I hope to be able to do further tests to substantiate this belief at some future time.

The Reever Knot can be untied by grasping the paired working ends and standing parts on either side of the knot close to the knot and alternately pushing and pulling vigorously. The knot will usually loosen sufficiently under this treatment to allow the working ends to be withdrawn from the end loops and the bend can then be easily untied. The bend is distinctive and it will normally be obvious that it has been correctly formed. The most likely error is that the working ends are passed the wrong side of each other in the centre of the knot and in that case the knot collapses immediately into a Reef Knot.

So the Reever Knot can be tied by a method which is easy to learn and easily remembered. It is proof against mis-tying and correct tying is easily recognized. It is a secure bend (in the sense of resisting alternating loads without loosening). It is compact and streamlined in form and the working ends lie neatly alongside the standing parts. I believe that the Reever Knot deserves to be more widely known and used.

References

Asher, H, The Alternative Knot Book, Adlard Coles, 1989

Budworth, G, The Book of Practical Knots, Adlard Coles Nautical, 2000

Miles, R E, Symmetric Bends: How to Join Two Lengths of Cord, World Scientific, 1995

Turner, J C and van de Griend, P, The History and Science of Knots, World Scientific, 1996

Wright, C E I and Magowan, J E, Knots for Climbers, Alpine Journal, vol 40, 1928, pp120-141