

## **The origins of the Climbing Sit Harness**

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Back in the early 1960s climbers simply tied the rope round the waist just as they had since climbing began a hundred years previously. Falling off wasn't fun and could be rib crushing, even lethal, as the rope constricted the chest. Unlike today, the maxim of the day was 'the leader never falls'. Also, of course, not having a harness, there was no good way to carry gear (i.e. 'runners' for protecting the leader) – which wasn't too much of a problem as there wasn't much gear to carry! Up to the end of the 1950s, leaders simply carried a few thin rope slings to use as runners by either looping them over spikes or round chockstones, or the knots could be jammed in cracks. (In 1957 I fell twenty feet onto a jammed knot runner, which stopped me five feet from the ground – so they worked!)

As runner technology progressed, and engineering nuts of varying sizes from a few millimetres to four or five centimetres were threaded onto varying thicknesses of cord for wedging into cracks, the amount of gear the leader carried increased considerably. And when British climbers started to aid climb with pitons and bolts on overhanging limestone cliffs in England and further afield in the Dolomites, carrying all the gear on slings over the shoulders was becoming increasingly cumbersome and awkward - a better system was needed.

Two climbers from the English Peak District independently came up with similar ideas for a broad waist-belt. One was Brian 'Tanky' Stokes, a leather worker in Sheffield. I was the other. I lived in Greenfield, a Yorkshire village in the northwest corner of The Peak. The local industry was based on textiles, with numerous woollen mills. The power to drive the looms and other machinery was carried to them by strong leather belting about 75mm wide and five millimeters thick. It seemed to me it would be the perfect material for making a waist-belt – it was not only wide and firm enough to spread the load on the waist in case of a fall, but it would also enable loops to be fitted for carrying gear around the waist. Equipment could then not only be easily located or 'racked' as it known today, but would also be much more comfortable carried on the waist and supported by the hips rather than hanging round the neck and shoulders.

Using this design, a local village cobbler, Cyril Hesden, sewed webbing loops to the belt through

which the climbing rope could be passed before tying on. D-rings were incorporated into the top and bottom of each loop. The lower ones enabled gear-carrying loops to be fitted, by knotting a cord into them. Upper D-rings were also available for clipping gear into such as a peg hammer. The cobbler also punched holes into the belt through which a narrow tape could be passed forming a sling around the waist to which a carabiner could be attached at the front. This carabiner not only simplified pegging (aid climbing) by forming the attachment point for a ‘cow’s tail’ or short sling of variable length for clipping into pegs, but, together with carabiners in the lower D-rings, it also held a ‘figure-of-eight’ sit-sling in place when doing multi-pitch abseils – and equally importantly, when aid-climbing big overhangs. Modified in this way it became the first sit-harness though the term had yet to be used.

The belt was originally sold at Brigham’s in Manchester and by a few other shops, but following its use on the Troll Wall climb in 1965, it was successfully marketed as the Troll Mark 2 Waist Belt and was eventually changed to padded nylon rather than leather. A new company was formed at this time by myself and a climbing friend Alan Waterhouse, who was already manufacturing a range of aluminium wedges for use in place of the old engineering nuts that climbers had been threading on slings. The Troll Waist Belt system remained in common use for five years, until Don Whillans came to the Troll workshop in Greenfield with a request for a harness for the forthcoming 1970 Annapurna South Face Expedition.

Don’s idea was a nylon ‘nappy’ for supporting the climber’s weight round the thighs and waist, forming a seat for aid-climbing and load carrying at altitude. Initially it didn’t work, but it did get Don, Alan and me thinking. After considerable trial and error ‘The Whillans Harness’ emerged and proved to be essential for the success of the expedition. With further input from Paul Seddon, another climber who joined the Troll company team at this time, the harness had some minor modifications and was introduced onto the market the following year. Although one well-known British climber reviewed it in Mountain magazine saying “if you want to be trussed in tape, this is the thing for you”, it was destined to become world famous both for rock climbing and mountaineering.

Eight years later there was still nothing really competing with ‘The Whillans’, at least not in the UK, but nowhere else either as far as I know, though we (Troll) were also making the Forrest Sit Harness for sale in the UK, for Bill Forrest of the USA. That was a broad waist-band or ‘swami-

belt' tied to leg loops with tape – a bit DIY, similar in some respects to the old Mark 2 Troll belt and sit-sling. And that was about it. Obviously others wanted to break our UK harness monopoly and there were rumours that Wild Country was working on something. This inspired us to get our fingers out!

I (being the designer at Troll) started off by playing around with our original 1960s Troll Mark 2 Belt. My objective was to combine the separate waist-belt and sit sling into a one-piece sit harness. It wasn't working. The sitting position was uncomfortable, whereas The Whillans (despite rumours to the contrary) was very comfortable.

Why did The Whillans work? I climbed in it all the time and frequently had hanging belays, but to remind myself what was going on, I hung in it from our harness testing beam in the mill – the answer was obvious – it worked because the crutch strap that we had designed with Don for the Annapurna climb was designed to take the load on the thighs first, before pulling up and away from the body to share the load with the waist-belt. This then took a smaller proportion of the weight, the bulk of the load being round the thighs. The problem was, how could I emulate that without copying the Whillans crutch design?

Sitting in the Whillans, suspended from the beam, I had one of those 'Eureka' moments: a small loop would do exactly what the upper half of the Whillans crutch did. All it needed was a different shape of leg loops to go with it! The Troll machinists who really were "wizards in web" quickly made the first sample. Then, together with my partners, Alan and Paul, we tweaked it a bit and it worked – the Troll Mark 5, the world's first 'belay loop' sit harness was born. Within a year it was copied. Within two or three years, just about every climbing company round the world was making a variation on the theme. Now there's almost nothing else.

Interesting to think it began with the Troll Mark 2 Belt, which inspired Don to come up with his idea – good lad Don – he never realised what he started when he came to Troll wanting a harness comfortable enough to sit in on Annapurna!