

Alpine Bindings

by Peter Southwell-Keely

A recent death notice for amateur historian, Alan Andrews, described him as a cross-country skier. These days, a person reading those words would think of someone using very skinny, probably edgeless, skis with New Nordic Norm bindings, soft, slipper-type boots and skiing on prepared, groomed trails. That does not at all describe Alan Andrews, who rarely, if ever, skied in that fashion. Alan was a ski tourer, always off-piste, who used alpine touring skis with bindings that could be adjusted for walking or climbing and also for downhill skiing.

This description of Alan stimulated the present article which is a summary of the way alpine bindings have changed through the years. It does not claim to be completely comprehensive and is simply my view.

Skiing in Australia began at Kiandra in 1861, and until 1909, Kiandra was the only place in the country where skiing occurred. The skis were made from mountain ash and the bindings were a simple leather strap into which one kicked one's boots. Hence the skis were known as Kiandra kick-ins. The size of the strap could be adjusted by leather thongs in the middle. There was nothing, other than the strap, to hold the boots in place. This type of binding continued to be used in Kiandra until the 1930s.



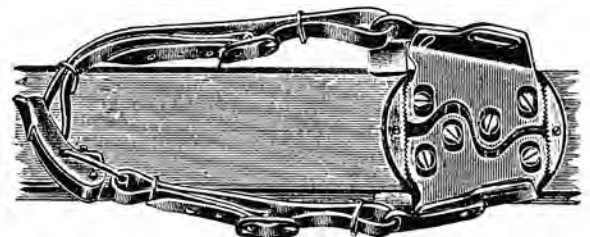
Kiandra kick-in skis owned by Phyllis Dowling

The Hotel Kosciusko at Diggers Creek opened in 1909 and for several years the traditional Kiandra bindings were used. The first European binding seen at the Hotel Kosciusko in 1913 was probably the Norwegian Huitfeldt, developed originally in 1894 and subsequently modified several times. The malleable iron toe-piece was passed through a mortise in the ski and bent up on both sides. The holes in the sides of the toe irons held a leather strap which passed over the instep of the boot, holding it in place. The mortise in the ski also took the leather heel strap. A third leather strap passed over the instep of, and underneath the boot, holding the heel strap in place. Although very popular for some time, the malleable iron toe-piece tended to move and the bindings became loose. Also the heel strap tended to wear badly through movement in the mortise.

An improvement on the Huitfeldt was the Alpina which possessed much stronger toe-irons which were readily adjustable to any size of boot. The toe irons were fixed to the upper surface of the ski and not through a mortise. The heel straps were fixed to metal hinges on the toe-irons so that practically no wear occurred on the leather.



Huitfeldt binding



Alpina Binding



The Unitas Binding

The Unitas binding was similar to the Alpina but with the distinct advantage that one could alter the binding without removing one's skis. This was very popular during the thirties.

After the Second World War, when imports from Europe were erratic and ski equipment in short supply, Bill Kenyon of KAC made a binding in Australia which was modeled on the Unitas which he called the Bogong binding. Bill sold his bindings for 2-3 years in Sydney, Melbourne, Hobart and Arthur's Pass, New Zealand.

I have included a photo of a modern Targa Telemark binding to show that it is really only an update of the Alpina, Unitas and Bogong bindings.



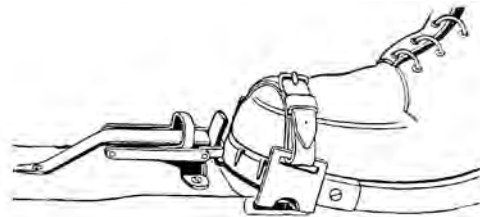
Bill Kenyon's Bogong binding



The author's Targa binding

A different type of binding which was very simple and very popular in Europe was the B.B.B. A metal clip was screwed to the ski in front of the toe iron. The clip engaged with a hook that was screwed to the toe of the boot. When the lever of the clip was adjusted into position, it drew the boot forward into the toe iron.

None of the bindings mentioned thus far restrained the heel of the boot to the ski. This is understandable as there were no ski tows until the 1930s and skiing involved a lot of walking along the flat and climbing hills as well as going downhill. Hence the need for free heel movement. This all changed with the introduction, in 1932, of the Kandahar binding.



The B.B.B. binding



The Kandahar binding

The Kandahar binding was a real game changer in several ways. It was the first binding that could be adjusted to allow free heel movement for walking and climbing and heel restraint for downhill skiing.

Instead of a leather strap around the heel, the Kandahar used a steel cable that was attached to a forward-closing, highfield lever in front of the toe iron. The highfield lever contained about five different positions for the cable allowing plenty of adjustment. The cable contained a steel spring behind the boot and did not stretch like a leather heel strap thus allowing tension to be retained.

The steel cable was led around the boot via two sets of guides (downpulls) on the sides of the ski. For walking and climbing the cable was confined to the forward set of guides, allowing free heel movement. If the skier wished to ski downhill, he/she would lead the cable through both sets of guides, thus firmly holding down the heel of the boot on the ski. In the Kandahar binding

illustrated, the forward and rear cable guides are closer than they would normally be, probably because the boots were very small.

The Kandahar binding remained a firm favourite for over 20 years, its only drawback being that it was not a safety binding.

The first safety bindings appeared during the fifties and used a cable and downpull configuration like the Kandahar. They differed in having a toe piece which could rotate sideways and a highfield lever that would open when excess pressure was applied to the heel cable. This allowed escape from sideways and forward falls.

The Marker Simplex, which appeared in 1953, was one of the first of the sideways-opening toe pieces and is shown combined with a cable attached to a backward-closing Tyrolia highfield lever that is held in place by a small hook over its tip. This restraining hook is connected to a spring that, under excessive heel pressure, pulls the hook over the end of the lever, releasing it and, with it, the heel cable.



The Marker Simplex toe piece, cable and Tyrolia highfield lever



The Tyrolia toe piece, cable and Salomon highfield lever

A similar arrangement is shown for a Tyrolia toe piece and a forward-closing Salomon highfield lever. In this case the cable is attached to a spring device within the highfield lever. When subject to excess pressure, the spring device would click backwards and release the tension on the cable, allowing the heel to release.

Later in the fifties, Marker decided to abandon the cable and introduced a turntable for the heel but the boot was restrained by a longthong leather strap and could not release in a fall. Marker did not introduce a safety heel release until the mid sixties.



The Marker Simplex toe piece and turntable with longthong



The Look Nevada toe piece and Grand Prix heel piece

The Look company introduced its rotating Nevada toe piece in 1950. By 1962, it had modified the original toe piece and added the Grand Prix heel piece. This Nevada system (illustrated) was the forerunner and prototype for many bindings that followed. The 2014 Salomon binding is clearly derived from the Look system.

This brings us back to Alan Andrews who was a ski tourer. I do not know which bindings he used so I have illustrated touring bindings with my own. The binding is shown in the walking/climbing mode. The manufacturer is Emery, a French Company, which has used, essentially, the Look Nevada system.



The Salomon binding, 2014



Author's Emery touring binding in walking/climbing position