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The run to Combe-Tabeillon is very quick, mainly through woodland. At Combe-Tabeillon there are numerous walks up into the hills. I always find it a pleasant, quiet place in the middle of summer. This is in contrast to George Behrend, in his 1965 book *Railway Holiday in Switzerland*, who described it as an eerie place where anything could happen. He must have been anticipating the mock hold-ups of the steam excursions staged by the Association La Traction, who are based at Pré-Petitjean three stations along the line, and that were filmed by MITV. All the walkers and cyclists I met were very friendly, and French speakers - of course. I am not sure why the CJ wanted the new Be 4/4 units, as the older ABe 2/6 units are not life expired. I assume the CJ will eventually buy more modern trailers to match the Be 4/4 and possibly introduce three-car trains to cope with increasing passenger demand. 

**TOP:** Combe Tabeillon station showing the trailer end of the train.

**RIGHT:** ABe 2/6 No.634 waits at Glovelier for its next trip.

**BELOW:** The interior of an ABe 2/6.



## On the rack

**D**id you know that there are some 140km of active rack railways in public operation in the world? This is an estimate put together by the Brienzer-Rothorn Bahn (BRB). Switzerland has a large share of these. There were more operations, but many have closed. Interestingly one company, the Jungfraubahn Group, operates some 49km, or 35% of the world total. The 7.6 km BRB is 5.4% of the total, whilst many more kilometres are on the MGB and Gornergrat, Rochers de Naye, Rigi, Pilatus, Monte Generoso and other Swiss lines. If the BRB's numbers are correct, it doesn't leave much for Austria, Japan, USA, Brazil, and other countries with lengths of rack-assisted lines. The USA has the Mount Washington Cog Railway in New Hampshire that opened in 1868. Many Swiss think that Nicholas Riggensbach invented rack railways - he did not! The honour goes to Sylvester Marsh who first patented his system in 1861. He designed and built the Mt. Washington line that opened over two-years before Riggensbach's Rigi Bahn. The American line is still the second-steepest rack railway in the world after the Swiss Pilatus line. Riggensbach credited the

## Der Beobachter

now little-known Marsh as the inspiration for the development of his rack system for which he originally obtained a French patent in 1863. Today the Swiss-designed Abt system is the one used by the majority of rack railways. Although the majority of rack railways are narrow (Metre or 800mm) gauge, a few are standard gauge (Mt Washington is a unique 4' 8" gauge), and in Brazil there is 8km of rack assisted 5' 3" gauge line. In Switzerland the Rheineck Walzenhausen line is an unusual 4' 0" gauge. Although today we associate rack-assisted railways with climbing gradients, in 1812 English engineer John Blenkinsop introduced a locomotive on the Middleton Railway at Leeds in Yorkshire that had a 3' cog wheel mounted on the outside of the engine. This meshed with crude teeth cast into the 'fishbelly' profile of the basic 3' length cast iron track sections. Blenkinsop patented his idea in 1811, so technically was 50 years ahead of Marsh! This was a relatively level coal-hauling tramway and it was soon found that simple traction would do the job so the idea was not developed, especially since the sole cog equipped engine blew-up in 1818 killing the driver! 