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A 'Railway' Bridge with a difference

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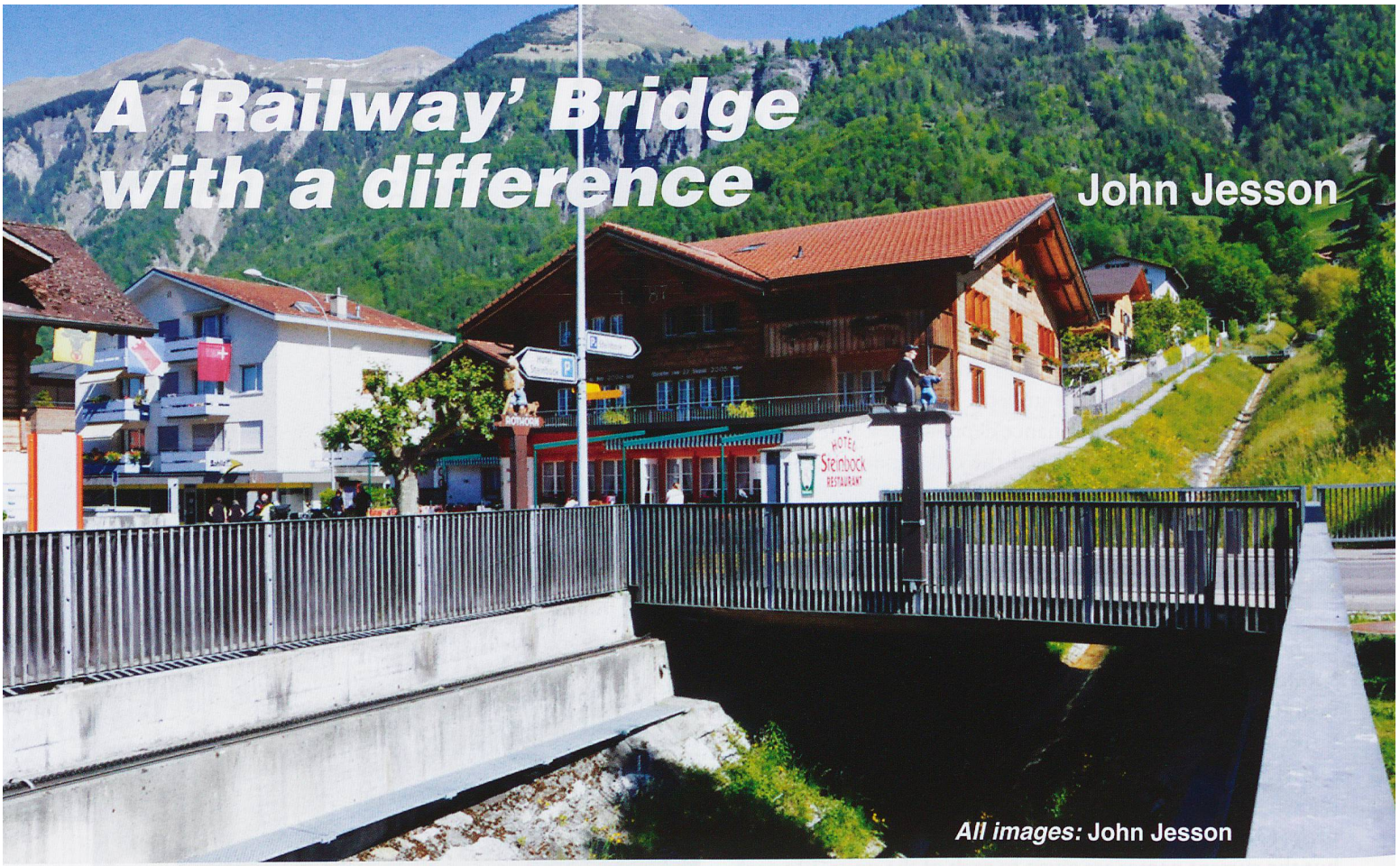


All images: John Jesson

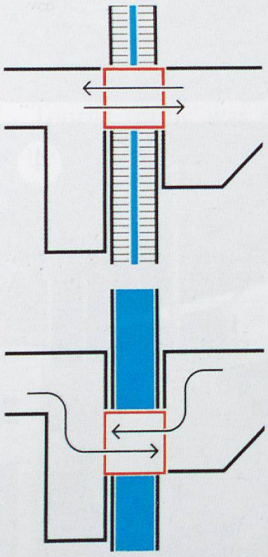
From the lake side of the bridge, showing one of the rails and the steepness of the drop of the Trachtbach.

Our Society may be called the "Swiss Railways Society", but the content of *Swiss Express* shows that the membership has a healthy interest in all things Swiss - especially if it moves!

On the main road that runs through Brienz there is a railway bridge with a difference. In fact, it is unique - it moves! It carries the main road over a stream. The stream, the Trachtbach, is docile in dry weather, but can become very violent indeed in less pleasant conditions. In August 2005, when many parts of the Alpine region were flooded, a major disaster hit Brienz and Meiringen. A stationary storm over the Rothorn deposited over 300 litres-per-square-metre in 72 hours, and the four 'Sturzbäche', cascade streams, which often look quite harmless, ran wild. The Glyssibach destroyed some twelve chalets, damaged many more, and two persons died. The Trachtbach burst-out when flood water caused a build-up of mountain debris and rocks against the road bridge, so that the dammed-up water cascaded onto the road and through the village streets, causing major damage. Prior to this, in 1870, a similar Trachtbach flood is said to have been even worse, and is remembered on the old tavern door beneath the Weisses Kreuz Hotel.

One effect of the flood caused by the bridge blockage was to cut off the central part of the village and make relief

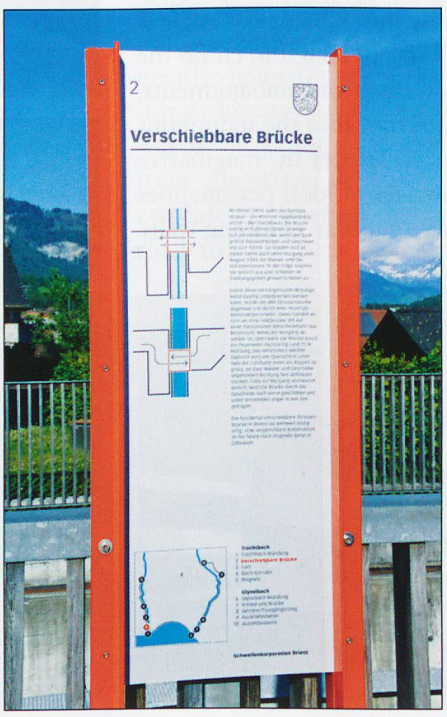
Verschiebbare Brücke



An dieser Stelle quert die Kantonsstrasse – die Brienzer Hauptverkehrsachse – den Trachtbach. Die Brücke stellte in früheren Zeiten unweigerlich ein Hindernis dar, wenn der Bach grosse Wassermengen und Geschiebe mit sich führte. So stauten sich an dieser Stelle auch beim Murgang vom August 2005 die Wasser- und Geschiebemassen. In der Folge brachen sie seitlich aus und richteten im Siedlungsgebiet grosse Schäden an.

Damit diese verhängnisvolle Wirkungskette künftig unterbrochen werden kann, wurde die alte Strassenbrücke abgebaut und durch eine neuartige Konstruktion ersetzt. Dabei handelt es sich um eine Holzbrücke, die auf einer horizontalen Verschiebebahn aus Beton ruht. Wenn ein Murgang absehbar ist, dann kann die Brücke durch die Feuerwehr rechtzeitig rund 25 m Richtung See verschoben werden. Dadurch wird der Querschnitt unterhalb der Fahrbahn mehr als doppelt so gross, so dass Wasser und Geschiebe ungehindert Richtung See abfliessen können. Falls ein Murgang unerwartet eintritt, wird die Brücke durch das Geschiebe nach vorne geschoben und unter Umständen sogar in den See getragen.

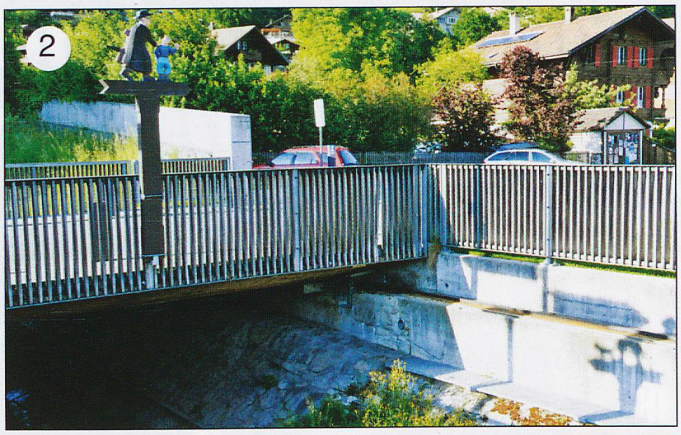
Die horizontal verschiebbare Strassenbrücke in Brienz ist weltweit einzigartig; eine vergleichbare Konstruktion ist bis heute noch nirgends sonst in Gebrauch.



LEFT: The panel alongside the bridge, describing its operation. *FAR LEFT:* The main text in German.

work in the severely damaged areas much more difficult. The chosen solution to guard against any future inundation is the new bridge, which can be moved 'downstream' towards the lake, thus allowing a much larger aperture (more than double) for the water and debris to flow through and into the lake. As it runs on steel wheels on steel rails, that surely makes it a "railway". Movement of the bridge is by electric power and the bridge moves 25 metres. There is open space on each side of the new bridge position with removable guardrails, so that diverted road traffic can still run through. However, on one side the open space is grassed, with a tree in what, would become, the middle of the carriageway!

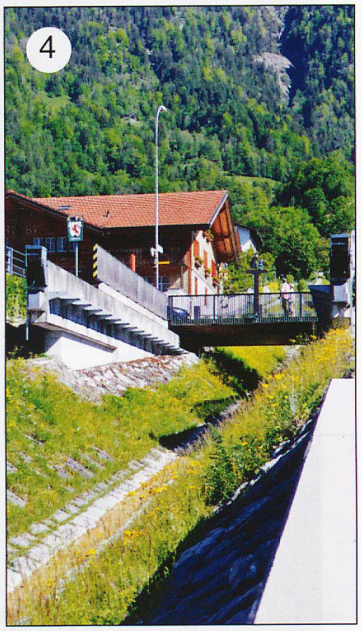
Alongside the bridge is a panel that describes the operation, and the otherwise functional bridge has a decorative wooden arrow directing visitors to the quay for lake steamers. It does not show the Zentralbahn, whose tunnel beneath the village was filled in 2005 with floodwater to a depth of 60cm. At the time the railway line was closed for several weeks. Between Brienz and Meiringen, the Aare broke its banks in several places; the railway disappeared. The Glyssibach, long considered harmless, carried away road and railway bridges on the east side of Brienz village. These have been heavily rebuilt; the great scar of the new streambed is slowly being reabsorbed on the hillside, and the destroyed homes were replaced on safer ground. The Brienz Rothorn Bahn's Trachtbach Bridge further upstream, was also severely damaged and later restored. In 2005 there were few tourists in Brienz after 23rd August! However the locals are courageous and resourceful people. Today they sit outside the Steinbock Hotel, originally dating from 1797, on which is carved 'Rebuilt 2006 after severe damage in August 2005'. Living with nature and the mountains was never safe, and still makes its demands.



1. A general view of the bridge with the lake in the background.

2. One corner of the bridge.

3. The bridge from the upstream side, showing the restricted clearance, as well as the decorative sign and the obstructing tree.



4. This gives a better idea of just how steep the waterway is, and how much extra space for water and debris is achieved by moving the bridge. The controls for the bridge are also in the picture.

5. The memorial plaque to the 1870 flood. "This building stands as the last witness to the Trachtbach catastrophe of 1870, during which the surrounding land was inundated. This door led into the well-known tavern '*Schnäggcloch*', the meeting place for coaches and travellers".