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# The Liverpool Connection and Switzerland's first main line

Bryan Stone



Rümlingen: E2/5 No.28, of 1858, now in the VHS, on a special heading the old main line, on Rümlingen Viaduct. No 28 pulled the first public train in 1858.

All Images: Bryan Stone

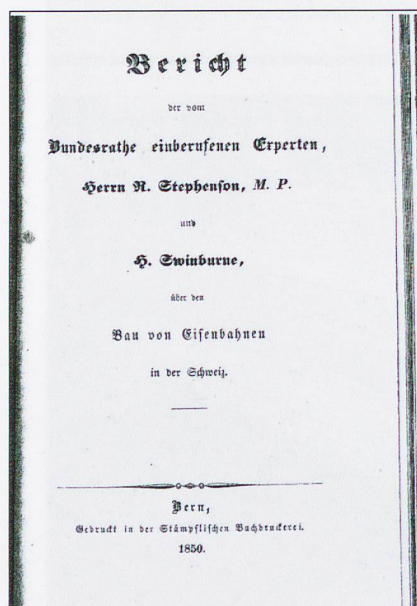
We forget today that Switzerland in 1850 was a poor country. After Civil War in 1848, a new Constitution had to create a new unity; previously Cantons had co-operated only when common interests prevailed. That was not always so. There was no national currency, no postal service, and trade was handicapped by internal frontiers and customs tariffs. Despite this, substantial flows of goods and persons moved over the Gotthard, Lukmanier and Simplon routes. Recession after the Napoleonic Wars saw the start of tourism, now basic to the economy, but not many shared in it as yet.

Rudolf and Emanuel Zwilchenbart were two well-educated brothers from Basel. They had left the impoverished village of Kilchberg in Basel-Land, where their father was vicar, to seek and find their fortunes in Liverpool. By the 1850s, Rudolph was an extremely wealthy shipping merchant, and also Swiss Consul in Liverpool. Emmanuel was high in the world of

banking and finance. They had seen the immediate success of the Liverpool and Manchester Railway and its successors, and were well aware of the rapid growth of railways and industry in northwest England. Emmanuel would be a moving force in giving Switzerland the railways it needed.

Johann Speiser of Basel is often forgotten today, but there is a memorial to him on Platform 7 at Olten station. He was the Zwilchenbarts' legal agent in Basel. He had founded two banks in Basel and was also advised by Emanuel, the architect of the new national coinage - none other than our familiar Swiss franc, based upon the French model. Emanuel impressed upon Speiser the importance of railways. Growing awareness in Switzerland had brought little in this area; the short line between Baden and Zürich, and the entry into Basel in 1844 of the Strasbourg-Bâle Railway, were in 1850 the only signs. The independent Cantons had failed to agree; co-ordinated action was needed to agree on routes and to attract capital, which would have to come from other countries. In 1848 the Federal Council commissioned Speiser to report on a possible national network, and Emanuel Zwilchenbart, who knew Robert Stephenson, introduced him as an international expert. Stephenson (and assistant Swinburne spent so) me months as consultants studying the whole country, with an economic, military and political remit. Their report in 1850 may be seen at SBB Historic in Brugg.

They proposed a strategic network of some 750 km of lines, most of which were indeed constructed. A direct line led from Basel over the Hauenstein pass to Olten, the system hub, where lines to Zürich and beyond, to Luzern, to Bern



Title Page of Robert Stephenson's report to the Swiss Government in 1850.

and Thun, and to Solothurn/Biel for Genève would start. Where there were lakes, steamers were to fill the gaps. The Gotthard was not in the first plan as the Lukmanier route, via Chur, was first choice for Italy. The Federal Council adopted the plan but the first major disappointment (and as it turned out error), was to go against Zwilchenbart's and Speiser's advice and to have these lines built by private companies under concessions from the Cantons. Emanuel Zwilchenbart was certain, after the Railway Mania financial disaster in Britain, that railways should be a public asset with a national unifying task. Forty years later, the Swiss people would indeed vote to take the private rail companies into national public ownership.

We go now to Basel, where Emanuel Zwilchenbart, not to be discouraged, at once recommended Speiser to form his own railway company to tackle the main project, Basel – Olten/Bern/Luzern. In 1852 Emanuel visited Basel, informing banks and industrial leaders on the business plan. He secured for Speiser and his committee finance from British and French investors, Baring, Rothschild and Crédit Mobilier, to support a Swiss investment. The new Schweizerische Centralbahn, soundly financed, was launched in Basel and on the Paris exchange. It obtained in 1852 its Concession from Basel-Stadt and, more reluctantly, Basel-Land, who were mistrustful. Emanuel now took two personal initiatives of major import. Dissatisfied with details of Stephenson's plan to ascend the Hauenstein with cable haulage on inclined planes, he contacted Von Etzel in Stuttgart, who had built the Brenner Railway. Etzel became Chief Engineer to the SCB. Etzel revised the survey to permit through locomotive working, creating a basis for future main line operations. Finally, Emanuel persuaded Thomas Brassey, who had built railways in

**TOP:** Present day: 526 733 at Läufelfingen, (Thomas Brassey's tunnel in background).

**MIDDLE:** Train time at Läufelfingen GTW 2/6 526 733.

**BOTTOM:** Driver's view of Thomas Brassey's Hauenstein tunnel completed, after a disastrous fire, in 1858.



various countries, to bid for the 2,495m tunnel section between Läfelfingen and Trimbach. Speiser, now Chairman of the SCB, engaged him for '... the lowest bid (CHF4,235,000, then £270,000) and with the highest



technical and financial skills'. We find Brassey staying in the Three Kings Hotel in Basel in 1853, when he committed to build the tunnel and approaches in 3½ years. Work on the tunnel section started in February 1854.

The section Basel – Sissach, started in 1853, was opened to Liestal on 19.12.1854 and to Sissach on 01.06.1855. For 4 years the provisional terminal station in Basel was in the Engelgasse, east of the city, as Basel (SBB) and a connection to the Strasbourg-Bâle line was only ready in 1860. Of the provisional station nothing remains. The line Basel – Sissach is however still in use today, and at least three of the original chalet-style wooden section houses along the lineside, in Lausen, Itingen and Sissach, have survived. Trains rush past every few minutes on the European corridor between Germany and Italy, which the SCB was to become. But first there was trouble.

Sissach-Läfelfingen was opened on 01.05.1857, but Läfelfingen-Olten only on 16.03.1858. Brassey delivered 18 months late. He had brought his team of engineers from Britain, and approached the work in his usual way, with a heading driven first at roof level, then clearing to obtain the full profile. There was no tunnel-boring machine; work was by hand, with only gunpowder for blasting; dynamite came later. It was more usual, in Continental Europe, to dig a pilot tunnel throughout, which would then be enlarged. Three shafts were dug from above, for access and supply of materials. The tunnel had two work camps, north and south, a non-British curiosity being that these, in different Cantons, were under very different administrations. On the whole line Basel – Olten some 150 workers died, some of accidents, some in a cholera epidemic. We know Brassey's supervisors had problems. He would later, after a disaster, face reproaches in court that his people ignored the SCB's engineers. And then language: most of the tunnel diggers were southern Germans, about 15% were Italians, some were local and there were a few British, who all lived in their own barracks in Läfelfingen. The parish clerk wrote regularly to the Police in Sissach asking for help in containing disorderly behaviour.

Before we come to the disaster, some notes from Läfelfingen are revealing. First, schooling: there was in Basel a centre for training of missionaries, the Basler Mission. One of the trainees, Philippe Steiger, was noted as caring for the spiritual needs of the British tunnel builders. The SCB paid for his

*TOP:* Itingen: 1854 lineside cottage.

*MIDDLE:* Olten, Platform 7, memorial to Johann Speiser, Chairman and founder of the Swiss Central Railway.

*BOTTOM:* Sissach, straight ahead, the original main line climbs away at 23°/°°, left the new line to Olten, of 1916.


services. He ran a village school for some 40 English-speaking children, and took (in English) funerals, often and baptisms, occasionally. The unfortunate Thomas Dudley, from Tipton, Staffs, for example, was buried on 21.08.1855; Joseph Horn, of Plumpton, Northants, on 25.05.56. Maria, daughter of George Morton, from Lincolnshire, and John, son of John Darnott of Newcastle-under-Lyme, were baptised on 29.10.54 in an 'English Service' in Läuelfingen Parish Church. Such entries in the Parish Registers, today in Cantonal archives, are of great interest but often unclear; even though the vicar, and Steiger, were educated, names and places got very tangled. Several 'falls from Viaduct' (i.e. at Rümelingen) were recorded. We have confirmation from police records that Brassey's own team were engineers, surveyors and other specialists; it does not surprise therefore that some travelled with wives and families. Others may have found new lives, as Richard Hargreaves, given a residence permit to reside permanently with his wife and family in Läuelfingen. Most British, however, are recorded as leaving when work was complete in 1858.

On May 28, 1857, when Brassey, under pressure from delays, water incursion and bad ventilation, had only some 270m of the tunnel to complete, an oven fire under Shaft 1 (nearest south end) intended to improve ventilation set alight ropes and cladding in the shaft. As this fell burning into the tunnel, it caused a major fire, which isolated and asphyxiated 63 persons, including several would-be rescuers. It took three days, from the south end, to find all the missing miners, and mass funerals were held at the church in Trimbach. The dead included 4 British, 21 German, 3 French, 2 Italian, and 43 Swiss. There is a memorial in Trimbach. Brassey had a small fund for sickness and compensation, which gave some relief to sick and bereaved.

The rest is soon described. The work was completed, and the tunnel opened to traffic with a party on 1st May 1858. The locomotive of the first public train, Ec2/5 SCB No.28, 'Genf', now stands, still in working order, in the Luzern Transport Museum. An acrimonious court case followed, Brassey claiming payment for the physical conditions which delayed his work, and the SCB holding him responsible for the fire and for his failure to complete on time; there was a penalty of CHF2,000/day for delay. The SCB was upheld, and Brassey's loss appears to have been about CHF1.5m (around £ 60,000 in 1858) or over a third of the contract price. It might have bankrupted a lesser contractor, but Brassey was scarcely troubled. His admiring biographer, Sir Arthur Helps, writing in 1894, dutifully omits the Hauenstein tunnel disaster and indeed, at the time, Brassey was busy

building railways in Canada, Spain, France and Britain.

The Liverpool connection became more distant, as Emanuel Zwilchenbart's friend Speiser died young in 1856, before the tunnel fire. However, one of the first SCB locomotives, Eb2/4 No.15, built in 1857, was named after him. Emanuel died in Liverpool at Christmas 1865. What was now reality was Switzerland's first main line. Built to double track, it was a good investment. It delivered steady dividends and, with the opening of the Gotthard route in 1882, and Basel the gateway for Italy, soon was hopelessly overloaded. The 9.7km climb from Sissach has a ruling grade of 23 ‰ (1 in 43), on the Trimbach side 27 ‰ (1 in 33). In steam days this meant two or three locomotives for the climb. In 1916 a new base tunnel was opened, with 8 ‰ grades, between Tecknau and Olten, to which traffic was diverted at Sissach. The old main line was virtually redundant. It was singled and, in 1953, electrified. Today a Basel S-Bahn service S9 takes the few passengers. Even this is regularly threatened with closure. Emotions still run high, but the Liverpool connection is now forgotten. It is a story worth telling.

Tailpiece: in 1868 Queen Victoria, on her way to Luzern from Cherbourg, came this way. She found the hillsides above Sissach 'very green and beautiful'. They still are. 



TOP: Sissach: 1854 Lineside cottage.  
RIGHT: Sommerau: the old main line climbing at 23 ‰ on a massive embankment above a local road.