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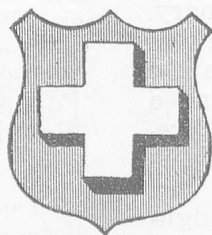
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# HELVETIA

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Hamilton

## 75 Years of the Gotthard Railway

(Part 2)

### Construction Difficulties

THE construction of the tunnel proved to be much more difficult than Mr. Louis Favre had ever expected. Unfavourable rock conditions, especially rotten strata liable to produce pressure, high temperatures, heavy inbursts of water, which could only be drained off very slowly owing to a low gradient (southern side 0.1%, or 1 in 1000), all this provided the working teams with an arduous task indeed. The most dangerous pressure section (to-day entirely safe-guarded by masonry vaults and abutments having a thickness of 3 m., or 9ft. 10 ins.) is situated practically below Andermatt. The "roof" of the tunnel, i.e. the overlying strata between the floor of the Andermatt Valley and the ceiling of the bore, shows a thickness of only 300 m. (984 ft.) at this spot, as against one of 1,500 to 1,825 m. (4,921 to 5,987 ft.) below some of the peaks of the Gotthard massiv (Kastelhorn). As only one heading was driven forward, instead of two parallel headings, as later on in the Simplon Tunnel, the boring, the removal of spoil, the supply of construction material, the draining off of water, the laying of compressed-air pipes, and the whole movement of persons had, in the approaches to the heading face, to be provided for within the limits of a narrow gallery. Needless to say that such conditions considerably hindered the process of construction, and work progressed very slowly, much slower than anticipated. In addition to this, power was lacking for drilling purposes, the ventilation was insufficient and the work badly organised. Many and serious differences arose between Mr. Louis Favre and the GB Board, for they could see, soon enough, that the tunnel would not be finished in time, although the building contractors led a heroic battle against the mountain. Working capital was continually short, too, and it appeared at times as

if work would have to stop altogether. Nevertheless, the supervising engineers and their men on the spot stuck to the job in hand, even under the most trying conditions. The completion of this great tunnel is mainly due to their untiring efforts. It is to his technical staff and to the engineers and men in the workings that Mr. Louis Favre had to leave the main task of the actual construction, his time being very much taken up with the difficult financial affairs and with other projects, among them being that of the proposed Simplon Tunnel. A great number of workers lost their lives through accidents, or were seriously injured thereby, while hundreds suffered from illness contracted by the unhealthy working conditions prevailing inside the tunnel. Even for those days, the sanitary and hygienic conditions in the workmen's camps at Goschenen and Airolo, as well as in the tunnel itself, left a lot to be desired, also. And the complaints of the GB Board did not help much in this respect. During the construction period of the tunnel, 177 men had fatal accidents and 403 were seriously injured. A monument was erected in Airolo later on in remembrance of the victims of the Gotthard Tunnel, which bears the Italian inscription "Le vittime del lavoro."

The numerous difficulties, all of which Mr. Louis Favre could never have foreseen, prevented the completion of the tunnel within the agreed period of eight years, and the expenditure greatly exceeded the estimates. According to the construction contract, the tunnel should have been completed by the 23rd August, 1880. Mr. Louis Favre's health could not, in the long run, stand up to the continual agitation and to the numerous persecutions to which he was exposed. He died suddenly, during a tour of inspection inside the tunnel, on the 19th July, 1879, and even his worst critics had to admire this dauntless personality. After his death, the supervision of the tunnel construction had been carried on by Mr. Bossi, as Engineer in Charge, and by Mr. von Stockalper, as Technical Adviser.

## Meeting of the Advance Headings

The two advance headings, or alignment bores, met—very much delayed—on the 29th February, 1880, at 11.15 a.m. Before engineers and workers passed the opening from one heading-face to the other, a picture of Mr. Louis Favre was handed across; he was granted this highly merited precedence, though no longer being among the living. He would have been pleased to know, had he been alive, that the deviation from the alignment was no more than 33cm. (13 ins.) horizontally and 3 cm. (2 ins.) vertically. The surveying engineers could indeed be proud of their achievements.

For the contractors, Messrs Favre and Coy., the tunnelling enterprise ended with a complete financial failure. Mr. Louise Favre had lost both his life and his fortune. It was only in the form of a special favour that the Gotthard Railway Company granted a life pension to his daughter, Mme. Marie Augustine Naoum Hava. The total construction cost of the Gotthard Tunnel attained, after the final accountancy, the sum of 66,660,000 francs, as against an estimate of 51,754,250 francs.

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## News of the Colony

### NOTICE FROM THE CONSULATE

WITH a decision of June 13th., 1957, the Federal Parliament have decided to give special help to:

- (a) Swiss citizens who have suffered severe war damages during the years 1939-1945 and who since then have been unable to rebuild their existence (means of livelihood).
- (b) Swiss citizens who under analogue conditions lost the provider and who, as a result of their loss, could not build the existence which they could have expected under normal circumstances.
- (c) Swiss citizens who under analogue conditions suffered physical harm or whose health has been permanently affected.

Applications must be addressed **before June 30th., 1958**, to the competent authorities in Switzerland and any Swiss citizen in New Zealand who wishes to lodge such an Application should get in touch with the Consulate of Switzerland, G.P.O. Box 386, Wellington **without delay**.

## AUCKLAND SWISS CLUB

**D**EPARTING from the almost traditional monthly social evening, the Auckland Swiss Club embarked on something a trifle more venturesome—a "barbecue" held at Blockhouse Bay. Fortunately the weather man proved to be most kind and provided us with a calm starry night.

By eight-thirty or thereabouts things were well under way, and people either sat and talked, listened to music provided by able musicians Charlie Rickenbach, Alf Meier and Max Bachmann, or were just content to gaze at the wonderful scene before them—that of a silvery path created by the reflection of the moon on the waters of the Manukau Harbour.

At supper time, unknown to anybody, Mr. Bachmann had prepared for those lucky people present. "What do you think? Umh! Bratwurst of course." and what was not eaten on the spot was packed in paper and taken home.

Unfortunately as one well knows, when one is thoroughly enjoying oneself, time is apt to pass unnoticed very quickly.

To bring to a conclusion a most pleasant evening a number of old Swiss songs were sung, Max Bachmann accompanying on the accordion.

On this happy note most people left homeward bound, content in the knowledge that once again they had spent a memorable few hours with the Auckland Swiss Club. —D. PEYER.

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## WELLINGTON SWISS CLUB

### Picnic at "Games Farm" Near Paekakariki

**I**N splendid weather a group of 13 children and adults started off our picnic week-end on Saturday, February 15th. In no time our little camp of 6 tents was built up at Games Farm and everybody competed in cooking meals over the fire. A special appreciation must be given to Mrs. Wyss who came all the way from York Bay on the bicycle. Later everyone gathered around a fire and old Swiss songs accompanied by accordion echoed up the valley and a glittering clear sky enclosed the happy scene.

On Sunday morning more cars arrived in intervals and by lunch-time the party had grown to about 60 members. It was a very hot day and small groups here and there rested in the shade under the trees. Others refreshed themselves in the pool nearby and plenty of Ice Cream cooled and refreshed everybody.

Later in the afternoon some ball games were organised and a Maori Haka was produced by a group of young people, decorated with fern leaves, when returning from a walk in the bush.