125 years of railways in Switzerland

125 YEARS OF RAILWAYS IN SWITZERLAND

For three years already, the railway line from Strasbourg to Basle had been operating into Switzerland when the first Swiss railway started up between Baden and Zurich on 9th August, 1847. It was called "Spanischbrötlibahn" after the fresh rolls which it carried rapidly from the then fashionable spa to the town on the Limmat.

The abolition by the Federal constitution of 1448 of tolls and road duties inside Switzerland greatly stimulated the operating of new railway lines. By 1860, the rail network spread over the whole of the Swiss Midlands, and already it was possible to travel by train from Geneva to Romanshorn and Chur. In 1871, the first European rack and pinion railway became operational on the slopes of the Rigi and opened up new horizons for tourism. When the Gotthard line was opened in 1882, the Swiss rail network began its international mission. A second penetration of the Alps followed with the Simplon Tunnel in 1906 and its approach line through the Lötschberg in 1913.

In 1902, the Confederation began to buy back the most important railway companies. With this, the Swiss Federal Railways were established. Today Switzerland commands not only 2,193 km of SFR railway lines but a considerable number of private railway companies whose operational circuit is hardly less than that of the SFR.

Switzerland started very early with the electrification of its federal railway system. Very hesitantly, the new traction method was introduced on the trams. In 1888, the Vevey-Montreux—Chillon line was converted to electricity. In 1913, the first important sections were electrified when the Lötschberg line was opened, followed by the Gotthard railway in 1920. Electric rail transport facilitated operations; travelling by rail became more attractive. The railways increased their appeal in the transport business.

The railway is the oldest amongst modern methods of transport. Yet it has not aged and remains unchallenged in several fields such as long distance travelling and bulk freight transport. Thanks to the principle of guidance by rail, railways are made for automation, a marvellous field for the introduction of electronics and cybernetics!

In addition, railroads use little space; to operate them hardly disturbs the environment. Thus new possibilities open up all the time for development, especially of commuter services in large towns and of transport services to and from airports. Already there is talk of new sections of high speed operation (200-300 km/h) between Geneva and Zurich and on the
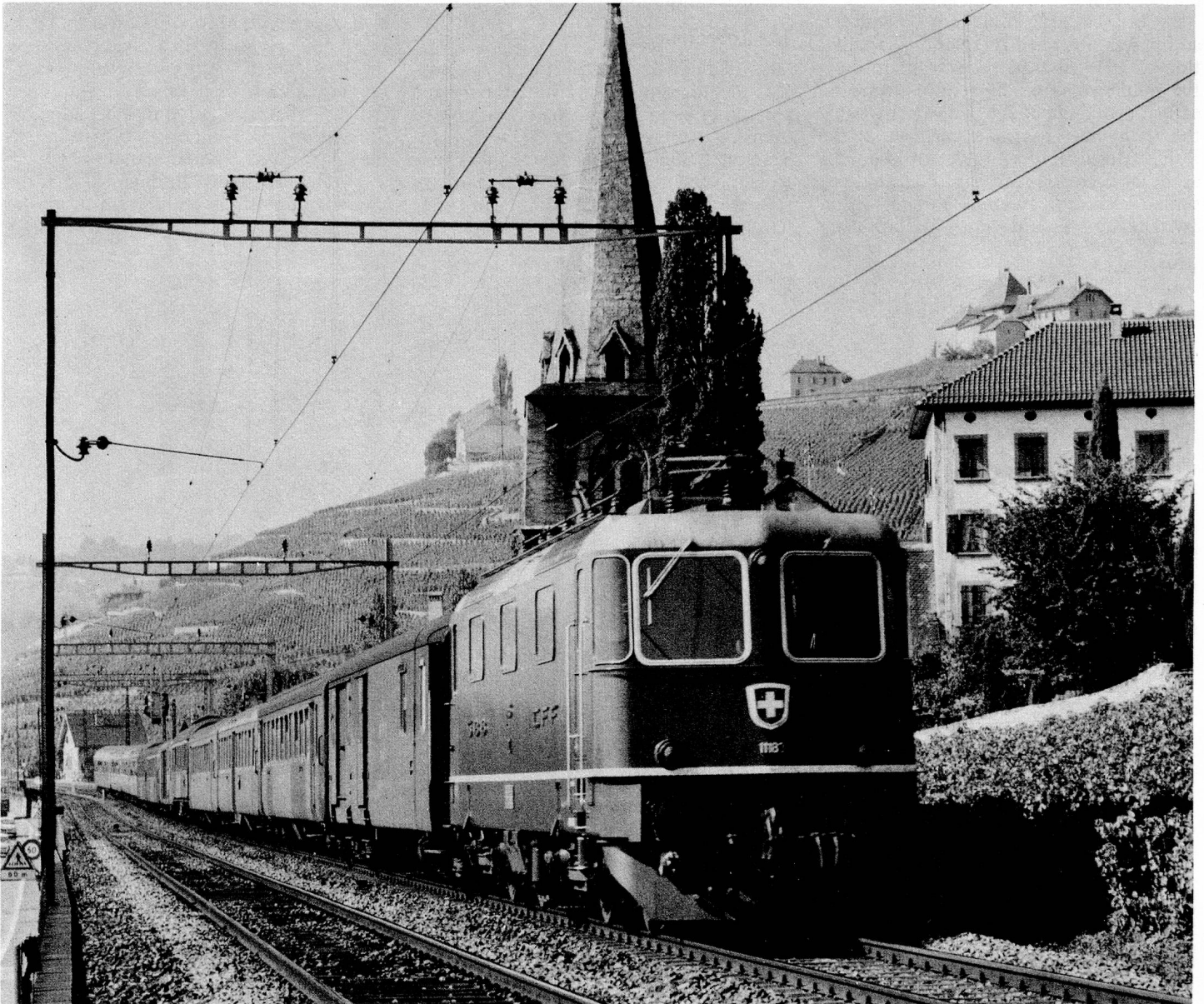
Fast train Lausanne-Brigue-Milan

North-South axis through an alpine base tunnel.

On the occasion of the jubilee of the Swiss railways, several demonstrations were organised. Those in 1942 when the SFR celebrated their centenary, stressed first and foremost the historic past of the railways, whereas the events organised for the 125th anniversary dealt with future problems.

SWISS TRANSPORT MUSEUM

History

Transport holds a key position also in Swiss economic life. If Switzerland was able to develop into a country of communications in spite of considerable topographical difficulties, it was because of her central geographical position and her transport tradition. The latter is expressed most conspicuously in the conquest of the Alps by constructing daring Alpine roads and railways. As early as 1883 and following the National Exhibition, the then technical inspector of the Department of Railways, an engineer called E. Dapples, suggested creating a railway museum.

But his idea could not be realised, and it was not until the National Exhibition of 1914, that it was possible to show the public some of the vehicles from the early beginnings of the railway. In 1915, the then chief machine engineer of the SFR, Alfred Keller, took up the idea again and expounded—by pointing out similar existing museums abroad — that Switzerland should not hesitate any

longer to start such a museum, for she was leading in many fields of railway technique. He proposed already at that time to include navigation and postal services.

A year later, the general management of the SFR made a few rooms available on the premises of the goods administration in Zurich. These became the modest home of the Railway Museum opened in 1918. Its contents, including some articles donated by the Postal Museum in Berne, formed the basis of the Swiss Transport Museum in Lucerne.

The first stage of construction was concluded in 1959. The *Verkehrshaus* then consisted of a group of six exhibition halls and three connecting halls, one conference room, an entrance hall and a restaurant installed in the former steamboat "Rigi".

Thus, from the idea of a railway museum first mooted over half a century ago, the Swiss Transport Museum has developed. The initiators may be gratified to see that the *Verkehrshaus* is the most highly frequented museum in Switzerland and holds a leading position amongst European museums of transport.

The Collections

The Swiss transport heritage consists of thousands of individual items and records which, for years, had been housed in many different places. Now that the Transport Museum has taken them over to supplement its collections and for special and travelling exhibitions, they have become available to the public.

They serve educational, technological, scientific and propagandistic evaluation. The Museum's collections include all aspects of transport, including information and tourism. The richly endowed transport archives comprise valuable documentary material such as manuscripts, deeds, books, periodicals, photos and pictures mainly from the past. In order to make them a source of educational knowledge, especially for young people, the collections have been arranged in a livley, lucid and easily comprehensible manner. They also include original vehicles, engines, apparatus, models, graphic illustrations and slide projections.

At the entrance to the connecting hall, immediately adjoining the main admission hall, one finds a steam engine of the Waldenburger line with a track gauge of 75 cm, the smallest railway in Switzerland. A stained window glass panel facing the garden shows the "Spanisch-brötlibahn", and together with an old alarm bell and the first track vehicle, a pit dog, these exhibits form the prelude as it were to the historic exhibition.

Dates, pictures and captions lead to the origins of the Swiss railways. With these pictorial presentations, original articles of the early days of rail transport are intermingled, such as a ticket printing machine, tunnel lamps, old signalling regulations, station cash boxes and uniform items of the first station masters. Graphic illustrations and other information explaining railway legislation and policy.

"Global Bonds through PTT" is the introduction of the exhibition of postal and telecommunications of the Swiss PTT
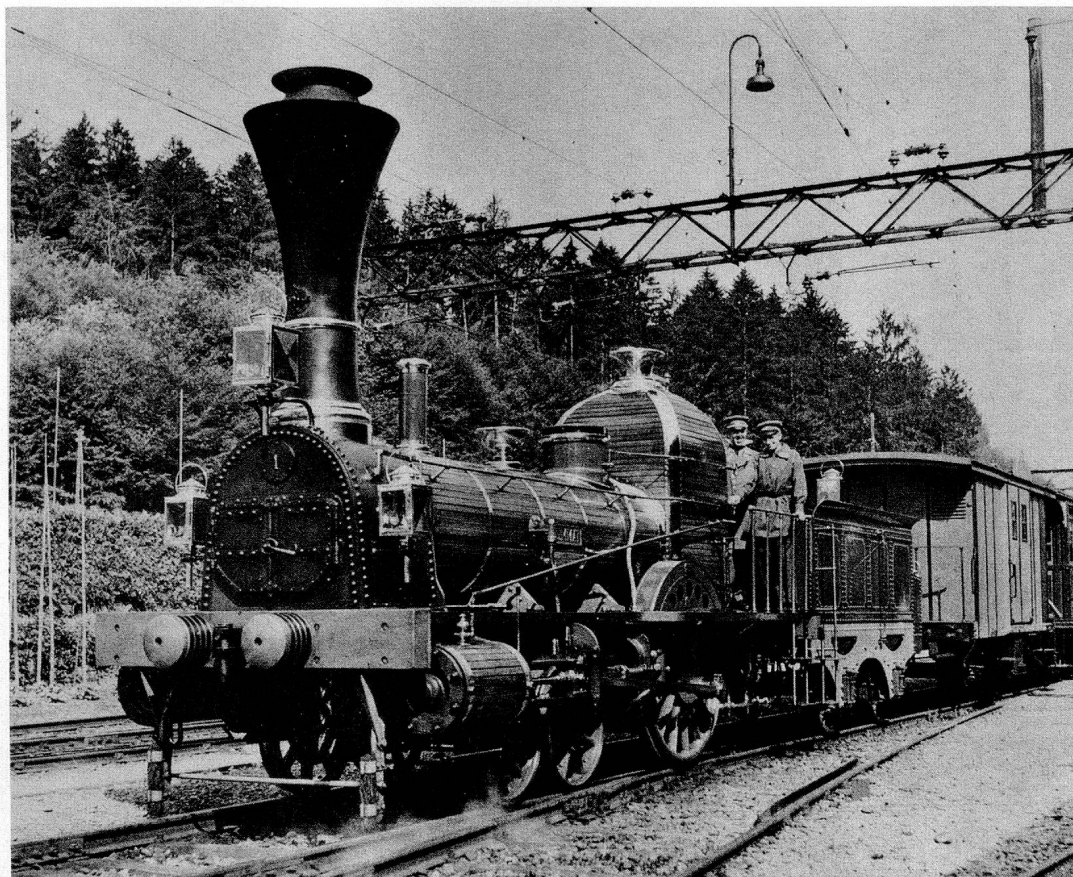
Railways yesterday . . .

. . . and today
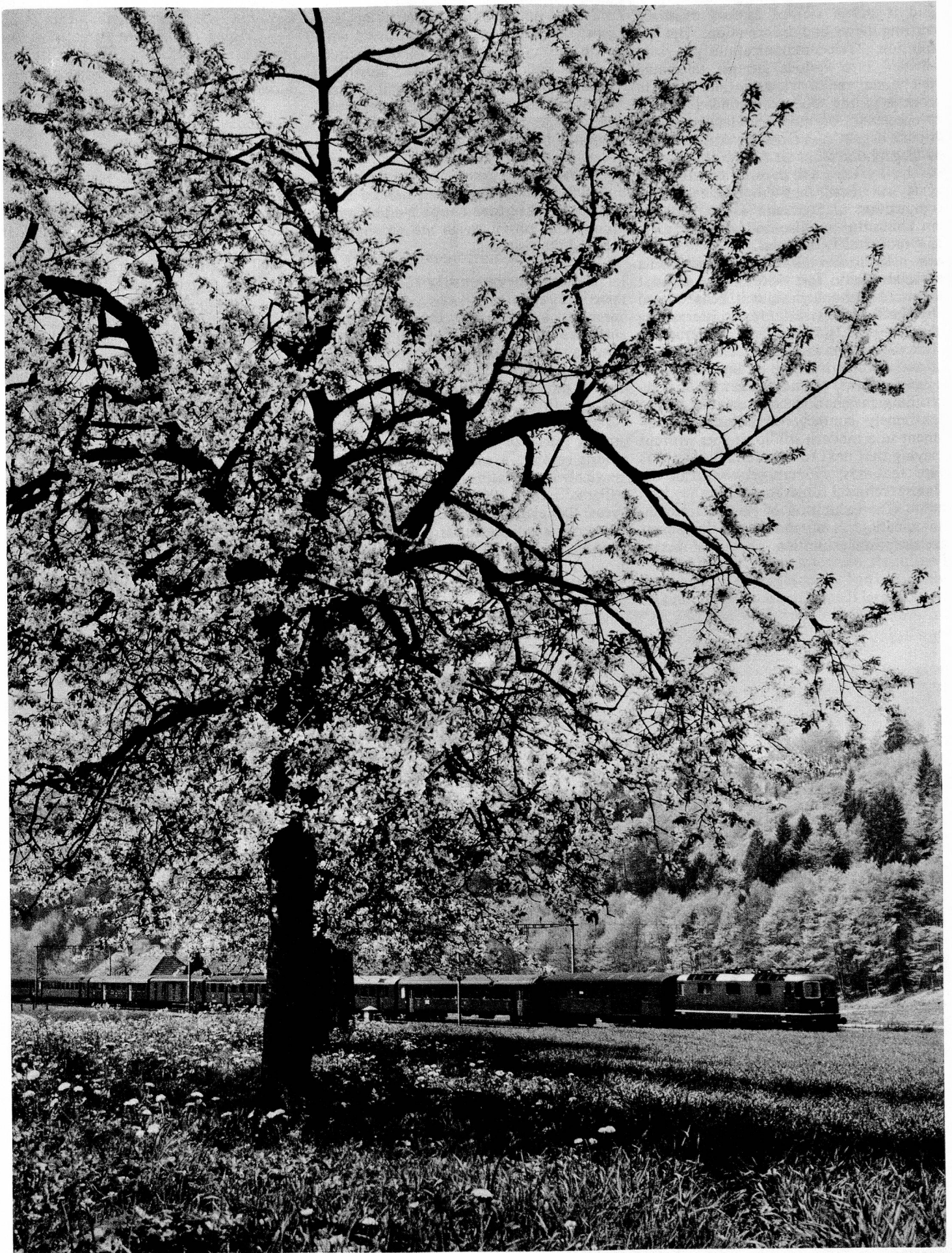
administration. It is in two sectors, electric communications and postal services, and it shows various aspects of transmitting news and information. The exhibition "Telecommunications" is subdivided into various groups: telegraph, telephone, radio, television and post. In concise form, one is reminded of the predecessors of modern telecommunication: a negro drum from the African bush, a megaphone from an Alpine region, one of the first telegraph transmitters of Morse. One will recall that the first telephone connection in Switzerland was installed in 1880. But one also finds details regarding modern PTT installations.

Radio and television are housed in a special gallery. The visitor whose interest is more technological, will be attracted by the first Swiss radio transmitter dating back to 1923 ("Champ-de l'Air") which is exhibited in its original entirety. Sections of broadcasting studios with producer's desks, gramophone and tape recording installations give an idea of the extremely complicated technical equipment in a modern studio. It goes without saying that next to the old radio receivers are the most modern sets with all the latest technical achievements.

The exhibition of electric telecommunications is on the ground floor next to the postal exhibition. The postal service

is a loyal and discreet servant and companion throughout one's life. From notices of births and deaths to love letters and bills, the postal service is entrusted with about everything there is of written, printed and pictorial news. Illustrated tables show the history of mail services from the Roman *Cursus publicus* and the *Ordinari* to the first Swiss postal organisation in Berne in 1675.

Passenger transport in postal coaches used to play an important part: a magnificent eight-seater coupe landau and a four-seater postal sleigh are on show to remind the visitor.

In the pavilion marked "Road transport" there are 40 cars, engines and accessories which show the technological and economic sides of road transport. One is reminded that a Valaisan, Isaac de Rivaz, was the first man to construct and to put into operation a motor vehicle. In the first 20 years of this century, there were over 40 companies which built motor cars. Of these, the Museum exhibits several: a car made by the Basle engineer Popp, dating from 1898; a vehicle "Berna" from 1902 and also from that year the elegant four-seater by Weber. This car is unique in its conception, for power transmission to the rear wheels

takes place by a system of belts used with fixed transmission ratio in a similar way as in certain small modern cars.

Young and old are attracted by the racing car of the Geneva brothers Dufaux (1905), whose eight cylinder engine produces over 100 h.p.

The renovated racing car which even today is capable of a speed of more than 140 km per hour, is one of the finest veteran cars in Switzerland. In the pavilion "Aviation" one learns that the first hot air balloon was operated already in 1783. It was in 1884 that a balloon was used for the first time for a circular flight. The actual development, however, started in 1903 with the take-off of the first motor driven aircraft.

This collection shows a number of original exhibits which give an idea of the beginnings of aviation: The balloon basket of the famous Captain E. Spelterini, with its instruments, sandbags, landing anchor and trail-ropes find great interest. Two original aircraft from the time of flying pioneers are hanging from the ceiling; they are the cause of great astonishment again and again. The double-decker aircraft constructed by Armand and Henri Dufaux (Geneva), the first aeroplane built in Switzerland suitable for longer flights, crossed the Lake of Geneva lengthwise in 1910 for the first time.
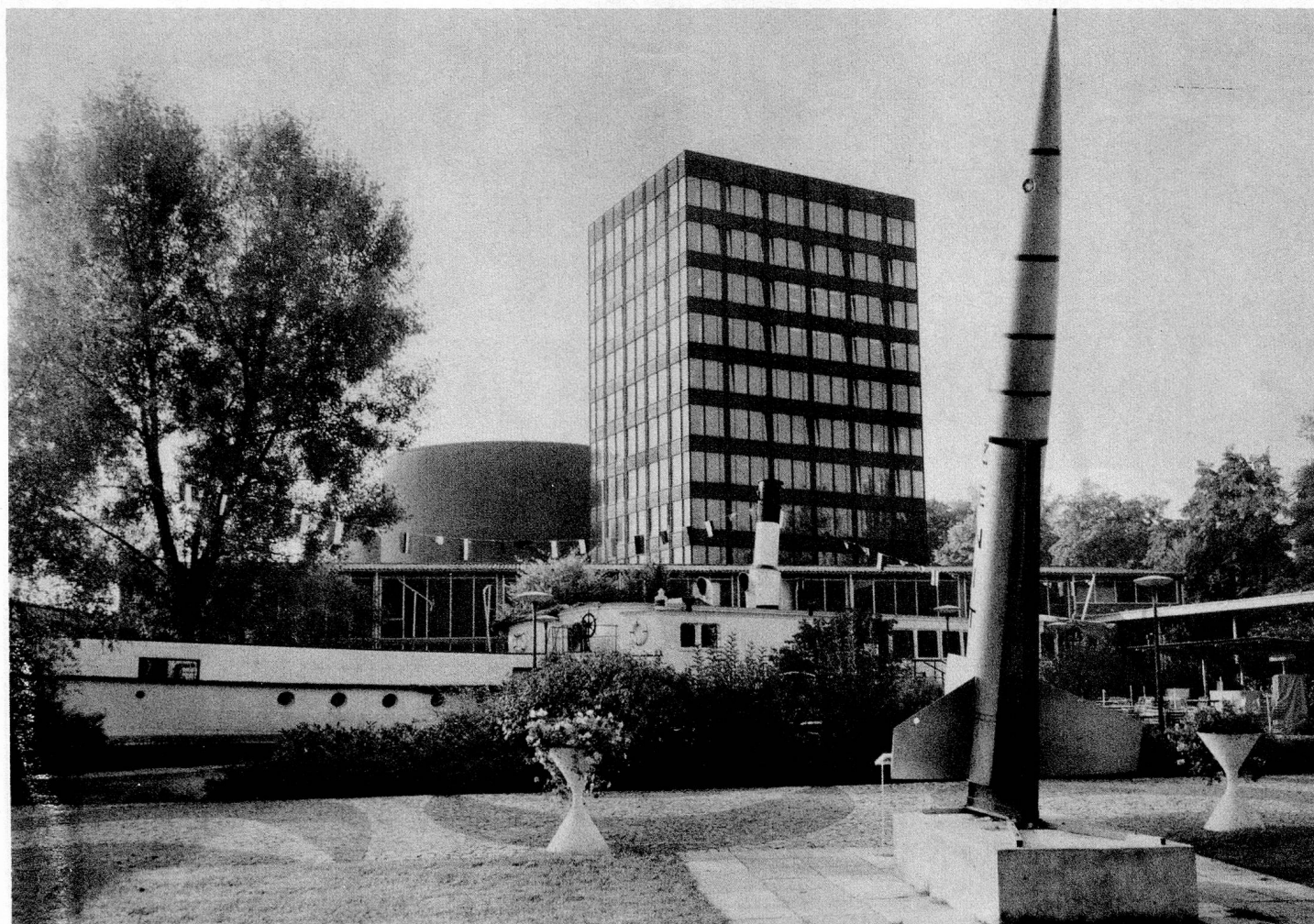
Swiss Museum of Transport in Lucerne

Equally important is the Blériot single-decker from 1913. It is with this machine that the well-known Swiss aviator Oscar Bider crossed the Pyrenees in 1913 and soon afterwards made the memorable flight from Berne to Milan. As representative of more modern times, there is the Messerschmitt fighter ME 109 which was one of the most successful piston engine fighters in the service of the Swiss Air Force from 1939 to 1949.

Various aircraft engines are exhibited and there is a very comprehensive collection of skillfully made models of all aircraft in the service of Swiss civil and military aviation. All models are at a scale 1:40 and thus allow comparison between the various aircraft types. A continuously running tape recorder and slide show by Swissair effectively complete the air transport exhibition. The other sectors of aviation (history, airports, security, fighting force, instruction) are also represented. Another part is reserved for space travel.

Lake and river navigation has been divided into regional parts within which old and new inventions are shown side by side. There is a particularly interesting and unique collection of ship models. The beautifully worked models of French frigates, Maltese galleys, freight sailing boats and men-of-war of all times cause enthusiasm with every friend of ships and convey something of the greatness which has always been inherent in vessels crossing the waters.

The steamer "Rigi" exhibited in the garden also belongs to this sector of the museum. It is the oldest steamboat in Switzerland, built in England in 1847 and in service on the Lake of Lucerne. During the 105 years it was operational, it covered 1,250,554 km until it was transferred to the Transport Museum to be overhauled. The saloon, foredeck and cabins were adapted as a restaurant.

Apart from a pavilion for tourism showing the various stages of development in this field so important for Switzerland from the 14th century to the present, the Transport Museum also houses the Planetarium "Longines".

The Planetarium is neither an observatory nor an astronomical look out, but a real planetary theatre which shows an artificial sky to experiment with. In the centre of the semi-circular cupola, 18 m in diameter, is situated a projector developed by the Carl-Zeiss works at Oberkochen (Western Germany). This apparatus is a miracle of optics and precision, is 5 m high, weighs 2½ tons and consists of over 30,000 units. It projects onto the cupola the Northern and Southern skies in such perfect imitation, that one can normally see the firmanent in this way only on a clear winter's night. At the Planetarium, 300 people may watch the spectacle in comfortable armchairs.

The Swiss Transport Museum in Lucerne is certainly well worth a visit.

The unusually large number of participants at the 50th Assembly of the Swiss Abroad and their happy faces showed once again the deep impression

BERNE INCOGNITO

Berne made on Swiss compatriots resident outside their homeland. Berne is the epitome of a Swiss town and a centre of Swiss characteristics. That is why we should like to give all those readers unable to visit Berne at the end of August a small, unofficial glimpse of the essence of our town.

A Capital different from all others

Berne is certainly that capital of which foreigners have the wrong idea most often. Some expect bears to dance to the tune of alphorns in Berne's squares; others imagine that the capital of a country representing the world's coffers should at harbour banks and finance trusts. Fortunately, reality is quite different. Our heraldic animal dwells safely behind the walls of the bear pit. This, as well as Berne Cathedral, often lies immediately at the foot of the Jungfrau glacier thanks to the cunning telescopic lenses of press photographers. Nevertheless, the federal capital is situated 50 km away from the Alpine chain and the folklore of the mountains. On the other hand, Berne is purely a political capital of Switzerland, neither its banking nor industrial centre.

Berne is a gently, dreamy, medium-sized town whose population is slightly on the decline and whose few larger factories are taken over one after the other by important industrial concerns in other centres in Switzerland. It is probably the only European capital—San Marino, Monaco and the "capitals" of other minor states excluded—which has no international airport.

Yet Berne is worth a visit, and the Bernese by no means mourn the lack of international hubbub (with the possible exception of the business people), and they still enjoy relative peace and quiet.

The town is situated on a long, rocky strip flanked by the waters of the Aar on three sides. The picture of the old town with its arcades, turrets and fountains shows an unmistakable Gothic character, and they are unique in our time. The Bernese take exceptional care to keep this heritage intact. The only inroad took place in 1848 when the Federal Houses of Parliament were built after Berne was chosen capital. The two older wings are copies of Florentine palaces and are just about acceptable. The centre building, however, is a problematical cross between a Renaissance Cathedral and a casino of a mundane spa at the turn of the century. It is unnecessary to state that the responsible architect most likely came from Swiss regions further East.

Heroic Times

Although surrounded by one of the richest agricultural lands of Switzerland, Berne can look back on a typically urban past. Our town is by no means an oversized village as many unkind tongues would have it. Its architecture, its cultural life and even its "Society" image easily stand comparison with much larger cities. This is due not only to its position as capital, but also to its historical importance.

In the fifteenth century, Berne grew from a modest bridgehead to the largest town in Europe thanks to clever politics. Its territories extended from the gates of Geneva almost to Zurich. This position Berne was able to hold until 1798, when the French invaded the old Confederation and also conquered the Bernese, took their State treasure and even carried off the silver of the old families to Paris.

The 300 years of dominating extensive territories were only possible because

Federal Councillor Tschudi shopping in the market