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The story of the Tünel, first opened in 1875,  
runs parallel with the history  
of 19th century Pera.

## An Underground Bridge Between Pera and Galata

# A Strange Sort of “Elevator”

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We have a very valuable study of the Tünel before us: *Chemin de Fer Metropolitain de Constantinople ou Chemin de Fer Souterrain de Galata à Pera dit Tunnel de Constantinople* by Eugene-Henri Gavand, a French engineer who arrived in İstanbul in May 1867 and was immediately captivated by Beyoğlu with its embassies and hotels. But there was one thing that continually preoccupied him. The only way of getting from Galata to Pera was by the steep street known as “Yüksekkaldırım”. Would it not be possible to replace that street, up or down which 40,000 people walked or rode every day, by some sort of “elevator”. If a tunnel were opened between Galata and Pera and a short train operated through it, this would make communications very much easier. Accordingly, Gavand produced a plan which he presented to the French government. On its rejection, he appealed to the British government, which agreed to finance him with a capital sum of £250,000 made up of 12,500 shares valued at £20,000 each. ➤

## A Strange Sort of “Elevator”

Gavand's tunnel project was presented to the Sublime Porte on 20 July 1868 and promptly rejected. Gavand returned to France in August of the same year, but was back in İstanbul by January 1869 and on 1 February 1869 succeeded in obtaining an audience with Sultan Abdülaziz. Gavand again presented his plan and conditions to the Sublime Porte, and managed, with the support of the Minister of Finance, Sadık Pasha, and Edhem Pasha, the Minister of Public Works, to have his proposals accepted, receiving the official concession for the project in a ferman dated 29 Safer 1286 (10 June 1869). The “Tunnel Ferman”, bearing the seal of the Sultan Abdülaziz, runs as follows:

“A request received from M. Gavand, a French citizen, for permission to construct an underground railway from Galata to Beyoğlu has been forwarded to the Ministry of Public Works. In view of the fact that Galata is a busy commercial district and the construction of an underground railway of this kind from Galata to Beyoğlu with the consequent improvement and widening of the roads and streets between the neighbouring districts would facilitate greater rapidity of traffic and communications and would thus be of great advantage to both the merchants and the ordinary people, a concession of not more than forty-two years from the date of issue of this ferman for the opening of this tunnel and the construction of a railway has been granted to the afore-said contractor, a tax of 1.5% of the proceeds to be paid to the State Treasury and the contractor to make no claim for damages or compensation against the State; a contract setting out the essential conditions and details was read and examined at a general meeting of the State Council and the issuing of the desired permit is found right and suitable; the matter was presented to me in writing and, because it met with my approval, an imperial decree has been duly issued. As required, two copies of the above-mentioned contract and terms were written, and were signed, sealed and exchanged between the above mentioned Ministry and the said Gavand; on the previously mentioned terms and for the period of the concession as determined, this order, containing a permit relating to the excavation of the named tunnel and the construction of a (rail)way is issued by the Imperial Council on condition that the contract and terms are meticulously observed. Written on the twenty-ninth day of the month of Safer in the year one thousand two hundred and eighty-six.”

An agreement containing three articles was signed by engineer Eugene-Henri

Gavand and the Ministry of Public Works on 2 Şaban 1286 (6 November 1869). According to this agreement the Ottoman government granted Henri Gavand the right to construct an underground railway between Pera and Galata.

A limited company known as “The Metropolitan Railway of Constantinople from Galata to Pera”, was founded on 8 May 1871 and construction of the 573 m long tunnel was begun on 30 June 1871. The engineers included Süleyman Bey, Briot, Victor Tridon, Jules Jacobs and Paul Mugnier. Work was completed in December 1874. As there were no mechanical excavators the work was carried out by hundreds of labourers, and the earth excavated was dumped at the Pera end in the Tepebaşı Gardens and at Tel Sokağı in Büyükparmakkapı, and at the Galata end in the Karaköy Square. A total of 180,000 gold sovereigns was spent on the construction, of which 80,000 sovereigns were spent on legal expropriations covering an area of 4,002 m<sup>2</sup>, and 10,000 sovereigns on machinery.

The Tünel was officially opened on the first day of Kurban Bayramı on 14 January 1875 and began operation on 15 January. The two steam engines of 150 atmospheres were built by the Creusot Co., while the carriages were built by David Desouche & Partners. The average annual revenue of the Tünel was 50,000 gold sovereigns. Gavand also had plans for the construction of similar underground railways at Medrese, Perşembe Pazarı, Kumbaracı and Yeniçarşı, but none of these materialised. In 1911 the French company that had built the Karaköy-Şişli tramway took over the concession for the Tünel from the British (with the consent of the Ottoman government), and an *Osmanlı Tünel Anonim Şirketi* (Ottoman Underground Co. Ltd.) with a capital of 165,000 Ottoman gold sovereigns and 33,000 shares of a value of 5 sovereigns each was established.

In those days the square in front of the Tünel entrance and the various streets in the vicinity were full of life and movement, due in no small measure to the Tünel itself. According to a copy of the *Annuaire Orientale*, the following were resident in the district in 1913: Benditsch (baker), Dontis (modiste) Jacques Adler (jeweller), Alberti (barber), Tomaselli (merchant), Gholiopoulos (florist), Rosetto (orthopaedist), Behar (carpet seller), Karl Popp (musical instruments), Emil Rosemann (bookseller), Leopold Kraus (tailor), Verdoux (optician), Alphonse Dufour (engineer), Edenbourg (dentist), F. W. Albert (General Manager of the Oriental Railways), Balthazar (doctor),

Roupen Papazian (lawyer), Minedjian (doctor), Peronin (professor), Antoine Soutis (jeweller), Courtessi Brothers (joiners), Alexandre Rocca (bookbinder), Kamilsopoulos (tailor), Marc Aperghis (shoemaker), Wolf Stein (tailor), David Stein (merchant), Nicolaus Benisch (representative of Schenker Co.) and Menahem Hodara (military doctor). According to the registers of 1912, the Tünel employee Theodossis Levlecopoulos lived at Küçük Hendek Sokağı No.14/3, and the station master Henri Daston at No. 25.

Although the *Osmanlı Tünel Anonim Şirketi* retained its concession throughout the first years of the Republican period, all its rights were purchased by the government of the Turkish Republic on 12 June 1939 in accordance with law no. 3643 for a sum of TL 175,000 and transferred on 16 June 1939 by decree no. 3645 to the *İstanbul Elektrik, Tramvay ve Tünel İşletmeleri* (İstanbul Electricity, Tramway and Tünel Management). The year preceding the transfer (1938) had ended with a loss of TL 13,777. 854 tons of coal had been burned, 71,066 journeys made, and 5,468,976 passengers carried, producing a revenue of TL 81,815: expenses amounted to TL 95,592.

Eugene-Henri Gavand's book was printed by Typographie Lahure in Paris in 1876. It contains 42 pages, with 25 plates with drawings and tables giving detailed information on everything from the railway carriages to the station buildings. According to these plates, the original plan had been to build a hotel in the upper floors of the station building at the Pera end of the Tünel, but there is no evidence that this plan was ever carried out. According to the compilations published at that time under the title of *Annuaire Orientale and Annuaire Commercial*, the following hotels were to be found in 19th century Pera: Pera Palace, Hotel d'Angleterre, Tokatlıyan Oteli, Grand Hotel d'Orient, Hotel des Quatre Nations, Hotel de Bysance, Hotel de Pera, Hotel de France, Hotel de la Grande Bretagne, Hotel de Londres, Grand Hotel de Luxembourg, Otel de Paris, Hotel de Vienne, Hotel Saint Petersburg, Grand Hotel de National, Hotel Imperial, Hotel Bristol, Hotel Germania, Grand Hotel Kröcker and Hotel des Princes.

The İstanbul Tünel is the third oldest underground railway in the world. The first was built in London in 1863 and the second in New York in 1868.

Thirty-four years after its opening, on 24 April 1909, at the time of the proclamation of the Second Constitution, the Tünel had to be closed for a few days when the riots taking place in the Cadde-i Kebir

(Grande Rue de Pera) erupted into the Tünel Square. After a strike of the tramway workers on 16 May 1920, fares were raised to 3.75 kurush for 1st class and 2.50 kurush for 2nd class. On 16 November 1924, four medical students, in protest at having been charged full fare in spite of the orders of the Ministry of Public Works, made their way with their friends to the Metro Han at the top of the Tünel and destroyed the

financial difficulties prevented the realisation of the project. Another underground railway project, dating from the beginning of the 20th century, bore the signature of a French engineer by the name of Anodin. This project was intended to connect Seraglio Point and Salacak, passing through the sea by a tunnel resting on sixteen large piers. The Ottoman government, however, showed no interest in the

off yesterday at 14.10 but, very shortly after passing the other train halfway down the tunnel, the belt conveying the train from Beyoğlu to Galata suddenly snapped at a point five or six metres ahead. The guard on the Galata-Beyoğlu train, realising what had happened, immediately applied the steam brakes, thus preventing a much greater calamity.

“Tahir Kütük, the guard on the train from Beyoğlu to Galata, had been joined by Hasan, one of the employees in the Tramway and Electricity Management Board. According to statements made by both Tahir and Hasan, they were unaware that the belt had snapped and thus saw no need to attempt to stop the train. As a result, the train descended at great speed, crashing into and completely destroying the engine room at Galata, while the 2nd class carriage in the front of the train went right over the room and crashed out on to the road.

“Although there were a number of minor injuries, only twenty had to be taken to hospital. Of these, six women and six men were taken to the St George Hospital, three being in a serious condition. The names of the injured are as follows: Esteria Belso, Ayşe, Jülya Mavrodi and her daughter Despina Mavrodi, Yevsimasis, Roza Alkan, Mişel Taksini, Vangel, Yani, Tifi, Niko and the deputy director at Karaköy of the Tünel management, Maşuk Taylan, who had suffered injuries to his left ear and left leg. Mehmed Ali, one of the assistant superintendents at Karaköy, who had been at work in the engine room when the train suddenly crashed into it, was, unfortunately, the first victim of the accident. He died in the Beyoğlu Hospital to which he had been taken..

“Since yesterday evening, work has been proceeding on clearing up the scene of the accident and removing the debris. It would appear from a technical enquiry into the accident that it was caused by the belt snapping. If the functionary in charge of the brakes had applied either the hand, air or electric brakes, as was done in the case of the upward train, it would have been possible to stop the train and avoid the accident. The functionary is said not to have been aware that the belt had snapped and to have thought that the train was running normally. An enquiry is also being made into whether or not the brakes had been properly checked. This belt, 600 m long, 1.5 cm thick and 20 cm wide, was one of the belts to have been imported most recently from America. It had been in use for close on a year and it still had three months of its life to run. This belt is inspected every twenty-four hours by the technician Salih Zeki, who ▶



**The Karaköy square in the first years of the Tünel.**

offices of the Tramway Company management. Damage was caused in excess of TL 1,000 and the Tünel had to be closed during the disturbances.

The companies and individuals who imported spare parts for the railway found Tünel business very profitable. The belts were imported from America but other parts were obtained in İstanbul. The companies and individuals concerned may be listed as follows: Beylerian (Hüdevendigar 21, Galata), Calinder (Union Han 45-46), Edward & Sons (Türkiye Han), Levant Iron and Machinery Co. Ltd. (Yorgancılar 146, Galata), Lobst Freres et Cie (Basmacıyan Han 1-4), Edward La Fontaine & Sons (Elalemci Han), Stock & Mountain (Philipidis Han, Galata) and Tucker C. Thomas (Kamonda Han, Galata). All these names and addresses can be found in the *Annuaire Commercial Turc* (1924-1925).

It is interesting to note that Henri Gavand saw the Pera-Galata Tünel as the first step in an İstanbul metropolitan underground system. In 1877 he prepared a plan for an underground railway from Kumkapı to Ortaköy via Beyazıt, Eminönü, Karaköy, Tophane and Beşiktaş, the passage across the Golden Horn being effected by tunnel. If the requisite finance could be found the underground system was to be extended as far as Kilyos, but

project and this scheme, too, was shelved.

A plan for a Beyazıt-Şişli underground prepared in 1911 and presented to the government in 1913 was intended to include the Galata-Pera Tünel as part of the scheme. According to the plans presented to the Grand Vizier Mahmud Şevket Pasha by a German and French consortium, the railway was to begin from Şişli and, after passing through Nişantaşı, Pangaltı, Taksim, Galatasaray, Şişhane and Galata, was to cross the Golden Horn and end up in Beyazıt. The line was to cross from Şişhane to Eminönü by overhead railway. This project, too, was shelved because of financial difficulties.

Accidents occurred in the Tünel in 1876, 1901, 1919 and 1921 through the snapping of worn belts. On 6 July 1943 an accident caused by the failure of the brake system caused one death and several injuries; at 14.05, when the train was just a hundred metres from the Galata station, the belt snapped and the train descended at great speed, crashing right through the station building and emerging on to the road outside. Twenty passengers were injured in the crash, and the station master Mehmet Ali Özmen lost his life. *Cumhuriyet* newspaper of 7 July 1943 tells:

“A serious accident took place in the Tünel yesterday, resulting, very fortunately, in very little damage. The train started