# THE CABLEWAY IN PARIS

***The cable (funiculaire) railway in Paris, between place de la Republique and l'glise de Belleville, was built by the French anonymous company and was open to the public in 1891.***

*From the history of the origin of this cableway, it can be seen that the Paris municipal council, due to the urgent requests of 10, 11, 19 and 20 districts of Paris and the suburban communes to arrange a more satisfactory communication of the Belleville heights with the city center – instead of existing public coaches, the so-called «voitures de petite monteuse» – had to come to find ways to implement these requests, and in 1885 civil engineer T. Fournier submitted to the municipal council a draft of the connection of these points by a mechanical tram, according to the system of the then existing trams of this kind in San Francisco, Chicago and London. Upon receipt of this project, the council had questions: is it necessary to assign the construction and operation of the proposed mechanical tramway to T. Fournier or it is the city which should assume the implementation of this project? The engineer T. Bienvenue, interviewed on this matter, recognizing the benefits of the proposed tram system, completely unknown then in France, supported the assignment of construction and operation to the engineer Fournier at his own expense and at his own risk. Meanwhile, the municipal council, out of fear of creating a new monopoly in favor of a private person or a capitalist company, on July 30, 1887, decided to build and use the cable railway using the assets of the city of Paris. Initial costs for the construction were determined at 1 040 000 francs. The resulting decision of the municipal council, however, was not approved by the Senate, and the city of Paris was asked to attend to the laying of this city line by the way of giving work and exploitation in concessionary order.*

*After some delays and fluctuations, on August 5, 1890, a contract was signed with the initiator of the project, Mr. Fournier, who, receiving a commission for construction and operation of a mechanical tram between the R publique square and the church square in Belleville, pledged to pay Paris 50 000 francs annually and not exceed the established rate of the contract.*

*The mechanical tram system offered by the engineer Fournier consisted mainly of an endless wire rope, located in an underground gallery and driven by a steam engine. The cars were equipped with a special mechanical device consisting of two pliers for fastening the cable. If the cable is fastened with the pliers of the apparatus, the car comes into motion at the speed of movement of the cable itself; if the pliers are open, the car stops.*

*During my inspection of this tram it happened that a train consisting of two cars, ascending to the Belleville at the entrance to the railway station, stopped, and for some time could not move further, despite all the efforts of the train attendants who pressed the handle of the apparatus because the pliers did not fasten the cable sufficiently. With further determination of the causes of this phenomenon, it was found that, following too much cable grease, the teeth of the pliers, sliding over its metal surface, could not fasten the rope sufficiently tightly.*

*Mechanical tram Belleville stretching about 2020 meters. On the extension of the entire line, consisting of six parts, there are seven garages with a double track, counting among them as the departure point near the Republique square, and the final point at the church in Belleville (terminus). The line passes along the streets of rue de Fobourg du Temple and rue de Belleville. The track, with a width of one meter, consists of the rails of the Braque system, weighing 30 kg in a linear meter. The greatest width of the street along the entire length of the line reaches 9 meters, of which 3 m actually fall into two tracks and the distance between them, and 3 meters from each side of the passage for the passage of coachees. The smallest width of streets, where one track passes, reaches 7 meters. The difference in level between the two endpoints of the track is 61,02 meters. On all its extension, the road appears to be highly meandering, so that out of 1686,59 m of the total length of the line in one track, 1243,3 fall on the straight parts of the track and 443,27 m in turns, the total number of which is 25; their radii are from 21 to 687,53 m. The greatest rise is 0,076.*

*The rolling stock of this line is represented by only six cars, of which four move daily in two trains, two cars each, simultaneously departing from the opposite ends of the line, and two spare cars.*

*The personnel is divided into four departments: 1) administration, 2) service of cars, 3) service of a workshop or depot, and 4) a track service.*

*1. The head of the administration is the director. The operation office is composed of: 1 depot chief, 1 line inspector, 1 cashier and 2 clerks (one of them is a storekeeper).*

*2. Service of cars: 9 mechanics-conducers, 9 conductor-collectors, 3 heads of posts, 3 agents issuing numbers in kiosks of starting points of the line, and 2 reserve agents.*

*3. Depot service: a) with the main engine-machine 1 senior mechanic, 3 junior mechanics; b) department for repair of cars: 6 workers, 1 lampman, 1 car cleaner and 1 painter.*

*4. The track service, supervising the correctness of the cable, the correctness of its position on the blocks and, in general, everything related to the movement of the cable: 1 senior engineer and 5 assistants.*

*For one-way fare, a payment of 5 centimes is charged. The duration of travel between the two extreme points of the route is from 12 to 15 minutes.*

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