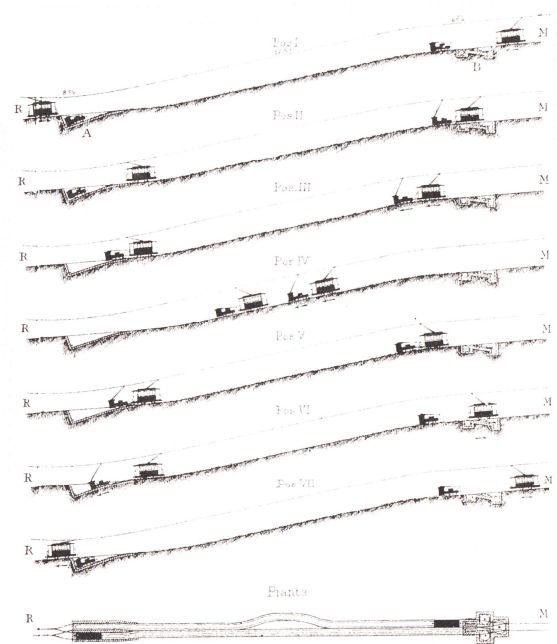


The funicular railway Palermo-Monreale (1898-1946)

Features of a quick and easy alternative mean of transport to the long and sloping provincial road between the suburb of Rocca and the town of Monreale.

Different positions of carriages and “carri-freno” on the railroad

When the two cabin cars came up and down on the middle section, they ceased to be independent and were each coupled to a “carro-freno”. They also worked as locomotors and were linked at the ends of a metallic rope, that was wrapped around a pulley located at the top of the section. So this funicular railway had the great advantage of requiring a lower traction than the rack systems used to overcome steep slopes, because the weight of the downhill train was used to balance the weight of the uphill one.



The funicular railway Palermo-Monreale (1898-1946)

The line (with a gauge of one meter) operated mostly in private right-of-the-way, except for the last part (about 500 meters long) which crossed the town of Monreale. It may also be separated into three parts: the initial segment (about 200 meters long) was a single-track railway; the second one (about 1079 meters long) consisted of a double-track line with common central rail and slopes between 11 and 12 %; the third one (about 766.40 meters long) was a single track rail line too. Where it operated in private right-of-the-way, the cross section shape of rail was flat-bottomed type (Vignole rail), while along the other segments it was Phoenix rail grooved in pavement. On double-track railway the “carro-freno” moved on a second rail with a particular narrow gauge (0.58 metres), which was internally positioned between rails with normal gauge. In case of rainy or humid weather the steep slope of the intermediate segment of the railroad would not allow to carry out simple grip traction. Therefore a special traction system was adopted: when the two cabin cars were running simultaneously downhill and uphill on the line intermediate segment, they ended to travel independently and each one was connected to a “carro-freno”. Also operating as locomotives and located downstream of the cabin cars, the two “carro-freno” were interconnected by a rope that wrapped around a pulley at the top of the line segment. Like the connected cabin cars, these wagons were powered by the electric distribution line through the trolley.



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