



It couples a carriage like a bench to the train. This is "Siemens' train". As it explains on the panel, in 1879 it pulled 3 railway carriages (max 6 passengers) for the speed of 12kms per an hour in Germany Expo. It surprised people as a train without the smoke. Here we have 3 rails not 2, it's because the one in the middle provides 150V electricity. This is just the same as an overhead wire provides the electricity to a pantograph today. Siemens' train was the first one in the world to take electricity in and made the train move. The output of this train's motor is 2.2 kilowatts equal to 3 horse power. Both side of the train you can see coils with fat wires. This is the source of power. If you add more current which flows inside the coil, it will be more powerful electromagnet. 13 years before this train is invented, Siemens invented generator with using electromagnet. This is self-excited generator. It will send electric current back to the electromagnet to make the electromagnet even stronger. After a while he discovered that if you flow electric current into the self-excited generator it can work as a motor. He made this motor more powerful until it can pull the railway carriage. Siemens invented Electric elevator and a trolley bus, this is why he is known as "A Father of Electrical Engineering" in Germany. Next #10 will be at the picture panel of 5th Ave, NYC. It's on the wall nearby Ford Model T.