

A picture of him at this time shows a chubby-faced fellow in a glazed cap and muffler, with papers under his arm. The face has an expansive smile; yet there is something honest and a little depreciating in it, instead of impudence. He was, as will be shown, an eccentricity among train-boys, and was no doubt sensible of it.

He established in the disused smoking-section of a springless old baggage-car—which served him as headquarters for his papers, fruit, and vegetable ivory—two industries little known to train-boys in general. He surrounded himself with a quantity of bottles and some retort stands—made in the railroad shops in exchange for papers—procured a copy of "Presenius's Qualitative Analysis" and while the car bumped rudely along conducted the experiments of a chemist. By hanging about the office of the *Detroit Free Press*, in some spare hours, he had acquired an idea of printing. At a favorable opportunity he purchased from the office three hundred pounds of old type, and to the laboratory a printing office was added.

It seems to have been by a peculiar, good-natured hanging-around process of his own, with his eyes extremely wide open and sure of what they wanted to see, that his practical information on so many useful subjects was obtained. He learned something of mechanics and the practical mastery of a locomotive in the railroad shops, and acquired an idea of the powers of electricity from telegraph operators. With his printing office he published a paper—the *Grand Trunk Herald*. It was a weekly, twelve by sixteen inches, and was noticed by the *London Times*—as the only journal in the world printed on a railway train. The impressions were taken by the most primitive of all means, that of pressing the sheets upon the type with the hands, and were on but one side of the paper. Baggage-men and brakemen contributed the literary contents. In 1862, during the battle of Pittsburg Landing, the enterprising Edison conceived the idea of telegraphing ahead the head-lines of his exciting news, and having them posted on bulletin boards at the small country stations. The result was a profitable venture, and the first awakening of interest on his side in the art of telegraphing, in which he was destined to play such a remarkable part.

During this time he continued his read-

ing with unabated industry. His train carried him into Detroit, where there were advantages he had never enjoyed before. He formed a project to read through the whole public library. He began with the solid treatises of a dusty lower shelf, and actually read, in the accomplishment of his heroic purpose, fifteen feet in a line. He omitted no book and skipped nothing in the book.

It could hardly be expected that so many active enterprises should be carried on without mishaps. During the chemist's absence a phosphorous bottle rolled upon the floor and set the ancient baggage-car on fire. A conductor rushed in in a fury, hurled all of the eccentric, painfully amassed apparatus out of the place, and, by way of rendering the abatement of the danger more complete, gave the astonished scientist, editor and merchant a thrashing.

Telegraphing, from the time he obtained a first rude insight into it, became more and more an engrossing hobby. He strung the basement of his father's house at Port Huron with wires. Then he constructed a short line, with a boy companion, using in the batteries stove-pipe wire, old bottles, nails for platina, and zinc (which urchins of the neighborhood were induced to cut out from under the kitchen stoves of their unsuspecting households and bring to him for a consideration of three cents a pound). His movements on the train were free and hardy. He had the habit of leaping from it, while it was going at a speed of twenty-five miles per hour, upon a pile of sand arranged by him for the purpose, in order to reach his home the sooner. An act of personal courage and humanity—the snatching of the station-master's child at Port Clements from in front of an advancing train—was a turning-point in his career. The grateful father taught him telegraphing in the regular way. He tried shoemaking for a short time—he had picked up this trade with others in some inexplicable manner—but it did not please him, and he shortly entered into his life work as a telegraph operator. From that time his interest in electric science has not varied. He has studied it intensely in all its forms. It constitutes the motive power of most of his long list of inventions. He even claims to have evolved from it a new principle, "etheric force," which sends a spark through twenty-five feet of air and has a peculiar action upon