

EDISON SAYS HIS NEW BATTERY IS A SUCCESS

Expects Storage Power to be Good for a 5,000-Mile Trip.

"It Is Now Up to the Manufacturers of Automobiles to Produce a Cheap Carriage," He Declares.

Special to The New York Times.

ORANGE, N. J., May 28.—"It is now up to the manufacturers of automobiles to produce a cheap carriage," said Thomas A. Edison to-day. "I have, after three years of hard work, solved the problem of an electrical storage battery which can be used for long distance work and which will wear three or four automobiles out before it will succumb itself."

This statement was made to a NEW YORK TIMES reporter at the inventor's laboratory in West Orange. Mr. Edison was evidently delighted over the situation. On May 23 of last year THE NEW YORK TIMES announced that the inventor had nearly completed his storage battery, and work has been going on ever since. On last Friday Mr. Edison equipped an ordinary electric runabout with batteries of twenty-one cells and a total weight of 332 pounds net for a trial spin.

"I sent my two men, Fleiss and Bee, out for the test," said the inventor in describing the experiment. "I told them to go over some heavy roads and up some steep hills. They went to Paterson, covering some sixty-two miles, the grades averaging from 2 to 12 per cent. When the machine came back only 17 per cent. of the original speed had been lost, and but seven out of the original twenty-nine volts had been sacrificed.

"On Monday I sent these same men out again on roads that were heavy from the rain. I told them to run the machine until it stopped, but they had gone eighty-five miles before the battery gave out. A few days before I had gone over the same roads in a high-power gasoline vehicle, but when we got to the steep hills the gasoline engine nearly stopped. The hills made absolutely no impression upon my electrical machine."

The peculiarity of most of the batteries now used is that lead is used in a solution of acid. The lead makes these batteries extremely heavy, so that about 125 pounds weight is necessary for each horse power produced. The best of these batteries will not run more than about forty miles without recharging, and this process takes several hours.

"I realized," continued Mr. Edison, "that the problem would never be solved with a lead battery. So I set out to secure some combination of other metals which would produce the desired effect. At last I hit upon a combination of steel and nickel suspended in an alkaline solution. The principle is entirely different from the electrical batteries now in use.

"It was my idea to construct a battery which would not be cumbersome heavy, which would have fine wearing powers, and which would not need attention. These hopes are realized in the new battery. It is about the same size as the ones now used, but the lighter metals make it possible to secure one-horse power from every 53.3 pounds weight. I am now making a battery for a bicycle. It will give a horse power for forty pounds weight, and machines can be made still lighter, but they are comparatively more expensive.

"These batteries will run for 100 miles or more without charging. They can be charged in a few hours. They require no attention, for all that is needed to replenish the liquid is to pour in a little water every now and then to take the place of that which has evaporated. I do not know how long it would take to wear out one of the batteries, for we have not yet been able to exhaust the possibilities of one of them. But I feel sure one will last longer than four or five automobiles.

"I am going to start an automobile out next week for an endurance test of 5,000 miles. I shall make five separate tests of this kind with different machines, and if I do not produce a battery that will last for more than 5,000 miles I won't sell a single one of them.

In Mr. Edison's new battery the plates are contained in a neat steel case, twelve inches high by six by four inches. The interior of this case is lined with an insulating material which resists the action of the potassium hydrate used in the cells. It is the intention of the inventor to begin immediately the manufacture of the new machines at his recently equipped factory, in Glen Ridge, N. J.