THE STORAGE BATTERY.

A scientific test of the new storage battery of Mr. THOMAS A. EDISON, lately announced with unusual modesty of proclamation, warrants the belief that it is at least a long step in the direction of a practical solution of the most important of the unsolved problems of electricity. The field of usefulness of the storage battery is wider than that once claimed for the horse, since in addition to its service in connection with transportation, it will have uses innumerable in the arts and in domestic economy. To meet the requirements for uses in which its value will be most conspicuous, the storage battery must be what it has not thus far been—light enough to be conveniently portable, cheap enough to compete with other mechanical agencies of power generation, and durable enough to stand jar, shock, vibration, and general disturbance without rapid and costly deterioration.

The basic idea in storage battery construction is the lead cell of PLANTE, invented in 1860. In this construction lead peroxide was the agent used in the depolarizing process. The best construction of the Planté battery was necessarily very heavy in proportion to its capacity for accumulating and surrendering effective energy, weighing from 124.5 to 186.5 pounds per horse power hour at terminals. Attempts to lighten the construction resulted in giving an impracticably rapid deterioration, which, under the best conditions, was discouragingly costly in repairs and replacements. In a word, while demonstrating the principle of the storage of electrical energy in a very interesting and instructive way, PLANTE's invention was chiefly useful in pointing out the great value which would reside in a storage battery that did not deteriorate from work, possessed large storage capacity per unit of mass, was cheap, might be charged and discharged rapidly, would bear rough treatment, and did not require a condition precedent to its employment that it should be "fool proof." These seem to have been the ends sought by Mr. EDISON in his work. If he has not attained them in ideal completeness, he has produced a storage battery which is an immense improvement upon anything hitherto made. The elements of his battery are iron plates, nickel oxide, and potash in solution. Experts in electricity have been experimenting with these elements in much the same combination as in the Edison invention for fifteen or twenty years, but for reasons which were probably different in every case the result desired has only just been reached. It is true of most revolutionary inventions that their discovery was imminent for a long time before it was really made.

The Edison battery is said to show an efficiency per unit of weight two and a half times greater than that of any storage battery hitherto made. It is initially inexpensive, will bear a great deal of rough usage without injury, is charged rapidly, and may be discharged at any rate desired, within practical limits. If these claims are vindicated in the results of a production on a commercial scale, the automobile, which will meet every requirement of the most fastidious mechanism, will be available. The area of electric lighting will be extended beyond the limits of practicable wiring, and the electric yacht will be found a vast improvement upon one deriving its motive power from fire and fuel. It may also mean the easy solution, among other things, of the tunnel problem in this city. Storage battery locomotives, capable of handling any train which enters or leaves New York, are now in successful use, but the Edison battery would seem to promise a vast increase in the efficiency of such traction engines, with a material reduction in their cost. We hope that all the confidence warranted by experimental tests will be established in practical use, and that in this instance the claim of success has not been too anticipatory. Just such a storage battery is perhaps more needed than any other device of a mechanical nature which is now engaging the attention of engineers.

The New York Times
Published: July 22, 1901