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ADDRESS OF PRESIDENT COOLIDGE IN HONOR OF MR. EDISON[1]

A PERSON of high character and remarkable achievement holds a fascination for all mankind. It is literally true that the world will make a beaten path to his door. Such persons are the leaders who by their example and their wisdom stimulate their fellow men to better things and are in the main responsible for human progress. They are the pioneers in opening up new territory in our physical surroundings and in the domain of thought. Not only the United States, but other regions in the far-off ends of the earth are pausing to-night to pay their tribute of respect and reverence to such a figure, while he is still with us, in appreciation of what he has done to advance the cause of civilization.

The life of Thomas Alva Edison, master of applied science, has been represented as a romance. He has been called a genius, a wizard. While these terms may well be used to describe his great abilities, yet this remarkably modest man has constantly refused to attribute such qualities to himself. In his blunt and homely way he is quoted as having said that genius is made up of one per cent. inspiration and ninety-nine per cent. perspiration. Even if not literally true, this expresses an important idea, which he has not failed to apply. Carrying on the same thought he is said to have made an adaptation of the well-known maxim to the effect that everything comes to him who hustles while he waits. Rather than to any mysterious power, he attributes his success to intelligent and persistent hard work along the practical lines of applied science.

That Edison was endowed at birth with that rare intellect and wisdom given to those who have helped shape our destinies, few will deny. But, when asked on his seventy-seventh birthday for his philosophy of life, the reply was: "Work—bringing out the secrets of nature and applying them for the happiness of man." His goal always has been some useful objective. Rarely has he wasted his energies. Having carefully determined what needed to be accomplished, he has gone ahead with unerring instinct of a seeker after truth, with an indomitable spirit for accurate

[1] Made over the radio from Washington to the Menlo Park Laboratory and relayed to forty-eight stations on the occasion of the conferring of the Congressional Medal on Mr. Edison by Secretary Mellon on October 20.

research, with an infinite capacity for taking pains. Temporary failure has only spurred him to renewed activity. Few men have possessed to such a striking degree the blending of the imagination of the dreamer with the practical, driving force of the doer. In the record of his inventions and improvements rests the unimpeachable testimony that he has brought things to pass.

I have been interested in his account of a visit to the White House in 1878 to exhibit his newly developed phonograph. He relates that he came at 11 o'clock in the evening upon the invitation of President Hayes, who, with Mrs. Hayes and their guests, became so engrossed in the marvelous device that the inventor did not get away until 3:30 A. M. But we know that Edison has never made a practice of retiring early.

The field of electricity will be most closely associated in future years with the name of Edison. It has been asserted somewhere that there is scarcely an electrical process or instrument of to-day which does not reflect in some way changes wrought by his researches. Steinmetz, who should be an authority, said Edison had done more than any other man to promote the art and science of electrical engineering. In his invention of the incandescent lamp and in the perfection of means for developing and distributing electrical energy he literally brought light to the dark places of the earth. Through these and other products of his genius old industrial processes have been revolutionized, new ones developed, and our daily lives have been made easier, our homes pleasanter and more comfortable.

Although Edison belongs to the world, the United States takes pride in the thought that his rise from humble beginnings and his unceasing struggle to overcome the obstacles on the road to success well illustrate the spirit of our country. We are happy to share his achievements as our contribution to progress. He represents the finest traditions of our citizenship. At the request of the Secretary of the Navy in 1915 he became president of the Naval Consulting Board, which looked into inventions and devices designed to aid us in preparedness and later in our participation in the world war. From 1917 to 1919 his entire time was at the disposal of the government. Not only by his own discoveries, but by training in his laboratories men who have gone out to important places in the scientific and industrial world and by encouraging countless others to renewed efforts in applied science and invention, he has made a notable contribution to education.

This is my message to Mr. Edison: Noble, kindly servant of the United States and benefactor of mankind, may you long be spared to continue your work and to inspire those who will carry forward your torch.

THE HISTORY OF ELEMENTARY MATHEMATICS IN THE PLIMPTON LIBRARY[1]

WHEN Christopher Plantin and his successor, John Moretus, sought to develop their great printing establishment at Antwerp in the sixteenth century, they collected a large number of specimens of the best medieval and Renaissance manuscripts and of representative products of the leading presses of Germany, France and Italy. This collection was increased by their successors and now forms one of the best libraries extant for the study of the history of bookmaking. Plantin felt that in order to be a master printer he must know thoroughly the history of his art. He wished to make the best books possible, and to do this he must know the best that had already been accomplished.

It was a similar circumstance that led me, fifty years ago, to begin collecting books for my own library. I am a publisher of text-books; my firm (Ginn and Company, of Boston, New York and London) seeks to make the best text-books possible, and I felt that, to do this, it was necessary to know thoroughly the historical development of books of this nature. I, therefore, began to collect such material, both in the manuscript form used in the Middle Ages and in the printed form beginning in the Renaissance period. As a result, my library covers the entire field of education, the mathematical text-books being merely one division, although one of the most important.

It is impossible, in the few minutes at my disposal, to do more than refer to a few of the important features of the section devoted to the early history of elementary mathematics. The subject was treated more than twenty years ago by Professor David Eugene Smith in his "Rara Arithmetica," and various references to my later acquisitions are mentioned in his "History of Mathematics" (1923, 1925). When the "Rara Arithmetica" was written he found that while DeMorgan was able to examine less than one hundred arithmetics printed before 1601, and while Boncampagni secured for his own great library less than three hundred, and Libri a still smaller number, my own collection was even then in excess of Boncampagni's, and in the last few years it has been very much enlarged.

Of the mathematical manuscripts in the library, something over one hundred, only a few of the most

[1] Address before the International Mathematical Association, at Bologna, Italy, on September 6, 1928.