able, even though such opportunities may be embraced in only a Bohemian or partial manner. Moreover, improved communication and transportation have strongly advanced the influence of the premier invention of printing on the culture and mutual sympathies of the world, and have largely expanded the radius of spiritual influences.

You will note also the insistence with which electric communication and electric power appear in the recital. These have their roots in the magnificent discoveries of Faraday, Joseph Henry and others in that third of a century which we have been considering. Their growth has been extended by the discoveries and inventions of many others working in distinguished ways from then until the present day.

Fundamental discoveries which bring such great results are the fruits of curiosity working under ideal conditions; that is, of the spirit of inquiry applied to the disclosure of new facts or inferred relations. With increasing rarity they are the result of one scientist's efforts, although that was a characteristic of Faraday's days. An entire laboratory group, perhaps working under some inspired leader, nowadays more often brings projects to successful conclusions. Utilizing both of these sources—individual genius and group cooperation—we have admirable centers in the university laboratories (including therewith laboratories of the engineering schools) to carry forward in paths corresponding to those that have led to such impressive improvements in the conditions of healthfulness, comfort and happiness of life for all individuals coming under their influence.

The extraordinary influence of the universities heretofore is worth briefly enumerating, but I have time to sketch the affair in one branch only, and I will choose electrical engineering, in regard to which I am best informed. Galvani, Volta, Oersted, Ampere, Ohm, Joseph Henry, Maxwell, Kelvin, Helmholtz, Hertz, Roentgen, Pupin and other discoverers of natural phenomena or expounders of relations upon which most of the structure of electrical engineering is founded, worked in university circles. Alexander Graham Bell was professionally a teacher, although his great invention of the telephone can not fairly be accredited to educational laboratories. Elihu Thomson was originally in the post of a teacher and many of his widely influential inventions arose from experimental investigations performed in those days. Faraday's location during his great discoveries in chemistry, electromagnetism and other branches of physics was in the Royal Institution, which was founded by Sir Joseph Banks, Count Rumford and others with objects which include "the facilitating of mechanical inventions, the promoting of their use, and the teaching of science and its applications by means of lectures and experiments."

The impulse of curiosity or spirit of inquiry, of which scientific investigation or research is the embodiment, is well nurtured in the university atmosphere, where the relations of science are brought to bear on enthusiastic young minds. It is an integral part of properly conceived engineering education, and is especially serviceable in those institutions where the students are encouraged to independent scientific investigation and thought. The result of newly vitalizing this view in engineering education is bringing good results where it is in effect. This experience gives assurance that we may rely on our present generation to work some of the faults out of our social organism and carry forward the improvement of modes of life by farther application of scientific discovery. One of the needs is to provide the better engineering schools with means to as closely associate their work with fundamental economics as they are now associating it with fundamental science.

We have now considered briefly some of the achievements which were made in the first third of the nineteenth century, that expired nearly one hundred years ago, and also the effects of those influences on our present-day life. Shining forth amongst it all is the glorious significance of Faraday's own work, which exemplifies

> . . . the vital words and deeds
> Of minds whom neither time nor change can tame.

OBITUARY

IN COMMEMORATION OF STEPHEN TYNG MATHER

IN memory of Stephen Tyng Mather, founder and former director of the National Park Service, who died two years ago, the first of the bronze plaques designed by Mr. Bryant Baker, of New York, for The Stephen T. Mather Appreciation, of which Mr. John Hays Hammond is chairman, will be unveiled in Mount Rainier National Park on July 4, Mr. Mather's sixty-fifth birthday anniversary.

The plaque is oblong in shape, measuring 30 by 35 inches. The deep interest of Mr. Mather in outdoor life inspired the design, at the right of which, against a background of mountain ranges, is presented in *bas relief* his portrait looking toward a group of trees. Above the portrait is the legend:

Stephen Tyng Mather, July 4, 1867—January 22, 1930.

Below it, across the base of the plaque, is the following inscription:

He laid the foundation of the National Park Service, defining and establishing the policies under which its areas shall be developed and conserved unimpaired for future generations. There will never come an end to the good that he has done.

A plaque is being placed on the south rim, near Yavapai Point, of Grand Canyon National Park in Arizona, and another may be placed along the north rim. Sites are being chosen for plaques in Yosemite, Yellowstone and Zion National Parks and officials hope that unveiling ceremonies may also be held in these parks on July 4.

Plaques will be placed during the summer at Logan Pass in Crater Lake National Park in Oregon; Grand Teton in Wyoming; Rocky Mountain and Mesa Verde in Colorado; Lassen and Sequoia in California, and Mount McKinley in Alaska.

The plaques will be placed in the national parks by the Park Service. The Stephen T. Mather Appreciation is prepared to provide plaques for all the twenty-two parks and to provide and place one in each of the thirty-four national monuments included in the National Park System.

Placement of a plaque near Chinook Pass at the highest elevation of the Mather Memorial Highway, which crosses the Cascade Range east of Rainier National Park, is awaiting choice of a site, and arrangements are being made to put another in Mather Grove on Redwood Highway between Miranda and Dyerville, California.

Friends of Mr. Mather are to plant a grove of trees on the campus of the University of California, of which he was a graduate, and for this memorial also, at the request of officials of the university, a plaque will be provided.

MEMORIAL TO THOMAS ALVA EDISON

A DESIGN for an Edison Memorial Museum and eternal light at Menlo Park has been approved by the Edison Parkway Commission of Perth Amboy, New Jersey, and was presented by its chairman, Joseph F. Deegan, to the Edison Pioneers at their annual dinner on February 11 in New York City.

According to the plan, the building, designed by Colonel Hugh A. Kelly and Mr. John B. Peterkin, would cost $850,000. It would be circular in shape, measuring 180 feet across, and would be surmounted by a shaft reaching to a height of 175 feet. This would be surmounted by a translucent globe with the hemispheres indicated upon its surface and lighted internally and externally.

Not only would the building serve as a memorial and tribute to Mr. Edison, but as a museum to preserve for posterity objects associated with his life and works.

The plans show four entrances to the building. They lead into a rotunda which would be centered by an Edison statue. Murals depicting dramatic scenes from the inventor's life would cover the surrounding circular walls. In style the building would be a modern adaptation of the Greek, simple and dignified, but with an expression of rising strength in the shaft supporting the illuminated globe. The exterior would be of marble and limestone.

MEMORIALS

FORMER students in chemistry at the Johns Hopkins University, including non-graduates, have organized the Chemistry Alumni of the Johns Hopkins University with Dr. Henry N. Holmes, of Oberlin College, as president and Dr. Lyman C. Newell, of Boston University, as secretary. Two meetings are held each year, ordinarily at the time of the meetings of the American Chemical Society. At the last meeting it was voted to establish "The Remsen Memorial Collection," and a committee consisting of Dr. Lyman C. Newell, *chairman;* Dr. John C. Olsen, Polytechnic Institute, Brooklyn, New York, and Dr. E. Emmet Reid, of the Johns Hopkins University, was appointed to take charge of the matter. The committee at present is anxious to obtain early portraits of Dr. Remsen, autograph letters on scientific subjects and inscribed copies of the first, or an early, edition of his books, particularly books in a foreign language. Colleagues, associates, students and friends of Dr. Remsen who have memorabilia of this kind are requested to write the chairman of the committee, Dr. L. C. Newell, 688 Boylston St., Boston, Massachusetts.

THE Medical Society of the District of Columbia held exercises on January 13, in memory of Dr. George Martin Kober, a former president of the society and for many years dean of the Georgetown University School of Medicine. Dr. Kober died on April 24, 1931. Addresses were made by Dr. Henry C. Macatee for the medical society; Rev. W. Coleman Nevils, S.J., for Georgetown University; Mrs. Ernest R. Grant, for the Washington Tuberculosis Association; Surgeon General Robert U. Patterson, for the medical corps, U. S. Army; Mr. George S. Wilson, for the board of public welfare of the District; Dr. Aleš Hrdlička, for the Anthropological Society of Washington. Dr. Arthur C. Christie, president of the society, was chairman of the meeting, which was open to the public.

IN the presence of a distinguished gathering of American and French officials and airmen a monument was dedicated on January 30 to the memory of Wilbur Wright at the field of Pontlong, five miles