organizing the department. The ties that bound him to the National Museum were too strong to be completely severed, and accordingly in 1895 he returned to Washington, resuming his office as Curator of Mechanical Technology, which place he continued to hold until his death, as well as that of Superintendent of Buildings, which his early training as an engineer made him most competent to fill.

The information that he acquired naturally led to the publication of numerous papers, and among these may be mentioned 'Beginnings of Engineering' (1888); 'The Development of the American Rail and Track' (1889); 'The Log of the Savannah' (1890); and 'Transportation and Lifting of Heavy Bodies by the Ancients' (1898). It culminated in his being chosen to prepare the history of the Pennsylvania Railroad, 1845–1896, a series of quarto volumes descriptive of the first fifty years of that railroad, which is beyond doubt the most complete history of the beginnings of railroad transportation in the United States.

As his reputation increased, he became more and more widely known as the great American authority on the history of mechanical arts, and in recognition of his work in this direction, the Stevens Institute of Technology conferred upon him the degree of Doctor of Science. He served as a juror on his specialty at the expositions held in Atlanta, Omaha and Buffalo.

Dr. Watkins was exceedingly loyal to the city of Washington. He was the moving spirit in the Patent Centennial that was held in Washington in 1891, acting as secretary of the executive committee, and had much to do with the volume that was subsequently published. He also served on various committees in connection with the inaugurations of the presidents and of the centennial celebration of the capitol. He was a member of the Cosmos Club, the American Society of Civil Engineers, the Society of Colonial Wars, the Society of Sons of the Revolution, the Society of the War of 1812, of which he was for some time treasurer, and the Washington Philosophical Society, of which he was for many years secretary.

Following the custom that has prevailed on similar occasions a meeting of the officers and employees of the Smithsonian Institution was held on August 12, for the purpose of taking action on the death of Dr. Watkins, and the following minute prepared by a committee consisting of Dr. Cyrus Adler, Mr. W. de C. Ravenel and Professor W. H. Holmes was adopted:

> In the death of J. Elfreth Watkins, the Smithsonian Institute is deprived of the services of a loyal, able and intelligent official; the foremost authority on the history of transportation and of the mechanical arts in America; and a man whose reputation extended far beyond the confines of his own country. He pursued his scientific and administrative labors under physical infirmities which would have crushed the ordinary man, yet he had the heart and found the time to be kind and helpful to every one with whom he came in contact, from the humblest to the highest. He was the founder of the collection of transportation and of the history of invention now in the National Museum, and from his pen there were contributed many notable memoirs on these subjects. He was upright, hospitable, generous, and leaves behind him the memory of a conscientious official, an upright man, a patriotic American, a notable contributor to scientific literature and a sense of personal bereavement on the part of all who have ever had the good fortune to be associated with him. His colleagues and friends extend to his widow and his children their deepest sympathy in this great bereavement, with the expression of consolation which the contemplation of the life and deeds of such a man must afford to those who loved him.

MARCUS BENJAMIN.

SOCIETIES AND ACADEMIES.

THE TEXAS ACADEMY OF SCIENCE.

AT the regular meeting of the Texas Academy of Science held in the Biological Lecture Room of the University of Texas, April 17, 1903, Mr. Robert A. Thompson, president of

the academy and expert engineer to the State Railroad Commission, delivered an illustrated lecture upon 'Mechanical Interlocking Devices at Railroad Crossings.' Fifty views taken in various parts of the United States were used to show the value of these mechanisms in the matter of safety to trains and in the gain of time—factors of the greatest importance in modern railroading. Dr. Eugene P. Schoch, instructor in chemistry in the university, explained from a recent point of view 'The Effect of Carbon upon Steel.'

The second formal meeting of the year was held in the Chemical Lecture Room of the university on June 10, 1903, at 3:30 P.M. The program on this occasion was as follows:

Dr. Harry Yandell Benedict, Associate Professor of Mathematics in the University of Texas: 'An Ideal History of Experiments on the Regular Pentagon.'

Dr. Eugene P. Schoch, Instructor in Chemistry in the University of Texas: 'Two New Lecture Experiments in Physical Chemistry.'

Thomas U. Taylor, Professor of Applied Mathematics in the University of Texas: 'The Northwest Boundary of Texas.'

Augusta Rucker, M.A., Instructor in Zoology in the University of Texas: 'A New Texan Kœnenia' (by title).

Dr. William L. Bray, Associate Professor of Botany in the University of Texas: 'The Vegetation of the Sotol Country' (by title).

A. M. Ferguson, M.S., Instructor in Botany in the University of Texas: "Some Recent Discoveries Concerning the So-called Ant 'Mushroom Gardens'" (by title).

Dr. Frederic W. Simonds, Professor of Geology in the University of Texas: 'Notes on the Topography of Texas' (by title).

The ballots having been counted, the following officers were declared elected for the year 1903–4:

President—Dr. Edmund Montgomery, Hempstead.

Vice-President—Dr. William L. Bray, Austin.

Treasurer—Mr. R. A. Thompson, Austin.

Secretary—Dr. H. Y. Benedict, Austin.

Librarian—Dr. William T. Mather, Austin.

Members of the Council—Hon. Arthur Lefevre, Superintendent of Public Instruction; Dr. H. L. Hilgartner and Dr. S. E. Mezes.

Frederic W. Simonds.

DISCUSSION AND CORRESPONDENCE.

THE INTERNATIONAL CONFERENCE OF ARTS AND SCIENCE.

To the Editor of Science: I have read with much interest the letter of Professor Dewey with respect to Professor Münsterberg's classification of the sciences. Several months ago there fell into my hands the enclosed copy of a 'Preliminary Program for the Official Addresses at the International Congress of Arts and Science' of the forthcoming exposition at St. Louis in 1904. Since this remarkable document is marked '*Confidential,* Proof under Revision,' it has been so treated by me up to the present date.

In the meantime, Professor Münsterberg, in an article on 'The St. Louis Congress of Arts and Sciences,' published in the *Atlantic Monthly* for May, 1903, has acknowledged himself as the author of the classification of the sciences set forth in the 'Program' and has led his readers to infer that this classification has been provisionally if not definitely accepted by the congress. He writes as a member of the 'Committee on Plan and Scope' of the congress and as the special representative of the 'philosophical sciences.' To quote his own words, he 'steps up to the honored platform of Park Street,' wherever that may be, 'and tells a wider circle what those plans are, and why they ask for interest and favor.'

We may perhaps doubt whether Professor Münsterberg speaks for the entire committee referred to, but since his explanation and defense of the 'Program' has been thus before the public for upwards of three months, it seems proper to assume that he invites criticism of his scheme of classification of the sciences from a larger circle of thinkers than that which centers in Park Street. I beg, therefore, to second Professor Dewey's invitation of the attention of the readers of Science to this matter and to submit a few brief remarks thereon.

The criticism which Professor Münsterberg's classification of the sciences seems to require is aimed not so much at the scheme itself as at the extraordinary claims he makes