

labor to diminish. We labor to save *life—human life* with all its ties. Were I to see a man tortured with facial neuralgia, and knew that I could relieve him by inflicting equal pain on a dog or horse, I hardly know what my decision would be. I suppose I should decide in favor of the man. But that is not the question which faces our profession in regard to experiments on animals; it is how we may better our knowledge and increase our power to save the life of husband and father—of wife or mother—of the child in whose life the hearts and hopes of its parents are bound.

“Certain of our opponents have their sympathies greatly excited by the occasional cry of a dog enduring pain from pharmacological experiment. Have they listened to the wail of the new-made widow? Some of them use their fiercest invective to calumniate those who have kept animals alive a few days after an experiment, that the causation of disease may be better understood and its prevention made possible. Have they realized the years of penury and misery too often the lot of the orphan? They have not felt personal responsibility for the life of the bread winner, or they would surely say with us, kill a hundred, kill a thousand animals if you have any reasonable hope of thereby preserving to one wife her husband, to one child its mother.” (p. 254.)

Since the greater part of the above was written, the unexpected news of Newell Martin's death has come from England. Our consolation for the relatively early loss of so brilliant a physiologist can only be that in the time given to him for scientific work he obeyed his own exhortation at the close of the lecture inaugurating the biological work of the Johns Hopkins University: “Let us, then, each work loyally, earnestly, truthfully, so that when the time comes, as it will come sooner or later, in one way or another, to each of us, to depart hence, we may carry with us a good conscience, and be able to say that in our time no slipshod piece of work ever left the laboratory; that no error we knew of was persisted in; that our only desire was to know the truth. Let us leave a record which, if it perchance contain the history of no great feat in the memory of which our successors will glory, will at least contain not

one jot or one tittle of which they can be ashamed.”

The isolation of the mammalian heart will always remain one of the triumphs of experimental physiology.

F. S. LOCKE.

HARVARD MEDICAL SCHOOL.

Anleitung zur Mikrochemischen Analyse der wichtigsten Organischen Verbindungen. Von H. BEHRENS, Professor an der Polytechnischen Schule zu Delft. Zweites Heft. Leopold Voss, Hamburg und Leipzig. 1896. 106 pp.

The second part of Behrens' text-book of microchemical organic analysis deals with the important fibres: those of woven goods; wool, silk, cotton, linen, hemp, jute and others; and those of paper; the cellular fibres of straw, alfalfa and wood. The microchemical study of these substances with reagents and in polarized light, and methods for examining woven goods and paper, complete the book. It is well printed and illustrated and a complete work in itself. Besides the illustrations in the text, three beautifully colored plates reproduce the appearance of the different fibres in polarized light and when stained with different dyes. It is well to remember that Prof. Behrens is not only an authority on this subject, but is the only authority for the student, as he has written the only text-books. The organic analysis is a worthy continuation of the author's inorganic analysis.

E. R.

SOCIETIES AND ACADEMIES.

CHEMICAL SOCIETY OF WASHINGTON.

THE 91st meeting of the Society was held Thursday evening, December 10, 1896. The President, Dr. de Schweinitz was in the chair, with thirty members and several guests present.

The first paper of the evening was by Prof. H. W. Wiley on 'The Mechanical Analyses of Phosphatic Slags.'

The second paper was by Prof. Charles E. Munroe, entitled 'An Early Specimen of Gun Cotton.' Prof. Munroe called attention to a sample of gun cotton which he had received from Dr. W. A. Hedrick, some two years ago, and which had been for many years

in the possession of Dr. B. S. Hedrick, formerly Examiner in the U. S. Patent Office. The specimen was in the form of a cartridge, consisting of long staple gun cotton, and although the paper was torn somewhat it was still possible to read that it was labeled 'cotton for shooting,' and that it was made by 'Lennig, of Philadelphia, under patent of October 6, 1846.'

The gun cotton is in a complete state of preservation and, as it apparently dates from shortly after Schoenbein's patent was filed, it is probably the oldest specimen in this country and shows that properly made gun cotton is a stable product. Prof. Munroe then offered in the same connection a copy of Schoenbein's original United States patent, and discussed his claim to being the original discoverer of gun cotton, holding that although he had much improved the process of manufacture, and made it practicable, that Braconot Pelouze and Dumas, had all preceded him in producing an explosive, cellulose nitrate. There was some discussion, especially as to a discrepancy between the dates of the patent and that on the specimen presented by Prof. Munroe.

Dr. W. J. Hedrick referred to the connection of his father with the Patent Office, and said that formerly the laboratory of the Agricultural Department, which was then under the Interior Department, was connected with the Patent Office, and that the specimen might have come from this laboratory. Dr. Littlewood said that he had tried to obtain further data, but had found no explosives in the office as old as this specimen. He further stated that few would be handed down by him to his successor, as his policy was to remove all explosives as soon as possible. Mr. Dewey said that he would not put much faith in the date on the specimen. Lennig may have made a mistake in the date. He was sceptical as to its age. Prof. Munroe said that if it dated back only to 1860 it was old. After further discussion by Dr. Fireman and Prof. Munroe, Mr. W. D. Bigelow gave a description of a 'Convenient Apparatus for the Estimation of Urea in Urine by the Hypobromite Method.' The apparatus consisted of a burette so bent that the graduated part forms the arc of a circle, the center of which is a lip at the end farthest from the stop cock. Above

the stop cock is a thistle-tube top for the introduction of the reagents.

A. C. PEALE,

Secretary.

TEXAS ACADEMY OF SCIENCE.

THE mid-year meeting of the Texas Academy of Science was held in San Antonio, December 31, 1896.

At the afternoon session the following papers were read: 'Notes on the Physiology of the Central Nervous System of some of the Lower Animals,' by W. W. Norman, professor of biology in the University of Texas. 'The Evolution of Culture,' by Thomas Fitzhugh, professor of Latin, University of Texas. 'Vertical Curves for Railways,' by J. C. Nagle, professor of engineering, Agricultural and Mechanical College of Texas. 'Notes on Indian Corn and some of its Uses Among Modern and Ancient Mexicans,' by Dr. David Cerna, Medical Department of the University of Texas.

The chief event of the evening session was the address of Maj. C. E. Dutton, U. S. A., on 'The Economics of Concentrated Capital.' Dr. George Bruce Halsted, President of the Academy, also spoke briefly on 'The Greatest Foundling House of the World, a Personal Study in Russian Sociology.'

Dr. Cerna had the pleasure of presenting to the Academy, Mrs. Frances Long Taylor, a daughter of Dr. Crawford W. Long, of Georgia, the well known discoverer of the anæsthetic properties of ether.

At the close of the meeting the members of the Academy were entertained by Major Dutton at his residence.

FREDERIC W. SIMONDS.

NEW BOOKS.

Catalogue des bibliographies géologiques. EMM. DE MARJORIE. Paris, Gauthier-Villars et fils. 1896. Pp. xx+733.

Life and Letters of William Barton Rogers. Edited by his wife, with the assistance of Wm. T. SEDGWICK. Boston and New York, Houghton, Mifflin & Co. 1896. Vol. I., viii+427; Vol. II., vi+451. \$4.00.

Problems of Biology. GEORGE SANDEMAN. London, Swann, Sonnenschein & Co.; New York, The Macmillan Co. Pp. 213. \$2.00.