tance of and respect for professors and professional workers will depend directly upon the spirit of service exhibited by each.

I feel that science is an intellectual activity, and that its nature is the very essence of the practical.

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EDUCATION IN ARGENTINA

I WAS quite surprised to find two misstatements in Dr. Shellenberger's note under this title.[1] One is an insignificant slip—the revolution occurred June 4, 1943, not June 3—but the other is somewhat more important. His sentence, "Each change in the position brings about the resignation of each of the interventors assigned to Argentina's six universities," is too sweeping. The Universidad Nacional de La Plata has not had an interventor for many years, and since the revolution there has been but one change in the presidency. In October of 1943, a set-to between the then minister and the then president of the university, over the execution of decrees resulting from the Manifesto[2] made the tenure of the presidency unbearable to any conscientiously liberal-minded man, and the president, vice-president and several other members of the Superior Council resigned; while other members, with totalitarian sympathies or tendencies, remained, and one of these latter assumed the presidency. Several months later there was held an election at which he was, on the first balloting, confirmed in office for a full term. The proportion of blank ballots cast was large enough to be highly significant of discontent, but not sufficient to invalidate his election.

This correction does not alter the spirit of Dr. Shellenberger's note, nor in the least affect his conclusions; but in ticklish matters such as these one should be meticulously careful in stating facts, else a well-intentioned declaration may do more harm than good.

Local circumstances oblige me to use a pseudonym.

PANAMERICAN

BUENOS AIRES

SCIENTIFIC BOOKS

THE CHEMISTRY OF CELLULOSE

The Chemistry of Cellulose. By EMIL F. F. HEUSER. v + 660 pp. 15 chapters, with 87 tables and 112 figures. New York: John Wiley and Sons, Inc.; London: Chapman and Hall, Ltd. 1944. $7.50.

THE rapidly expanding research in the field of cellulose combined with the diverse and extensive uses of this product as a raw material of industry have created an urgent need for a concise summary of the present state of knowledge of this subject. A brief compendium was called for, which would not only serve as a digest of the literature on the chemistry, physics and uses of cellulose, but which would also offer a systematic, coherent and integrated presentation of the subject for the interested technologist and for the student. The author undertakes to meet most of these requirements and does so quite successfully.

Dr. Heuser's work in the field of cellulose has been extensive and distinguished. His first book, following many contributions to the literature on the subject, was published in 1921. The author is systematic in his presentation and meticulous in supporting his statements and conclusions with references to literature, characteristics for which the reader will be grateful.

After an introductory chapter, Dr. Heuser deals with morphology of the fiber and composition of the cell wall. In this reviewer's mind, Dr. Heuser has done well in this treatment in exercising discrimination as to the reliability of references which have been confusing in the literature. It might have been well if the author had exercised this prerogative even more extensively.

In Chapters III, IV and V, the reactions of cellulose with water, with aqueous alkalies and finally with organic bases, ammonia and concentrated salt solutions are taken up.

Great space and weight are naturally given to the reactions of cellulose with alkalies (Chapter IV), which form the basis of industrially important processes. This topic is confusing, as every worker in this field knows, but the author, by making his discussion replete with figures and tables, does much to bring clarity to the reader.

In the chapter on the action of cuprammonium hydroxide on cellulose, an important process in the textile industry, each of the factors and conditions affecting the reaction is separately treated from a purely scientific point of view but without much reference to the industrial process. Although this treatment accords with the author's intent, as stated in the preface, a brief discussion of the industrial process would have been helpful.

The bulk of the book (Chapters VII, VIII and IX) is devoted to the important chemistry of the cellulose esters, cellulose xanthates and cellulose ethers, respectively. In dealing with the cellulose esters the author

[1] SCIENCE, 100: 11, 1944.

[2] SCIENCE, 98: 467, 1943.