

INTRODUCTION TO THE RARER ELEMENTS. BY PHILIP E. BROWNING, PH.D., Assistant Professor of Chemistry, Kent Chemical Laboratory, Yale University. New York : John Wiley and Sons. 1903. 155 pp. Price, \$1.50.

To those interested in the chemistry of the rarer elements this compilation of the scattered and oftentimes difficultly accessible literature of the subject will prove most acceptable. In the treatment of each element the author discusses its discovery, its occurrence in nature, its extraction from these natural compounds, the preparation and properties of the element and of the typical compounds that it forms, the leading characteristics of these compounds, and the best methods for the determination and separation of the element. In addition to these details there is given, under each group of allied elements, a series of laboratory experiments to be performed with the members of that group.

The author's treatment of this quite intricate subject is clear and concise, and the book will form a most useful guide to those who wish to study these interesting groups of elements, and also to analysts who have to deal with the separation and determination of these substances.

The few errors that have crept into this first edition are of minor importance and do not seriously impair the value of the work. The usefulness of the experimental methods that are described would, however, be greatly increased if these methods were given in more detail, and it is to be hoped that in the second edition the author may so expand those portions of the work dealing with the extraction and separation of the rarer elements as to furnish to chemists more complete instructions for the performance of these processes.

L. M. DENNIS.

PROCEEDINGS OF THE CHEMICAL METALLURGICAL AND MINING SOCIETY OF SOUTH AFRICA—WITH APPENDIX. FEBRUARY, 1897, TO SEPTEMBER 18, 1899. R. W. HUNTER, Edinburgh; or Engineering and Mining Journal, New York : Price, 21s. net.

The publication of this volume was delayed because of the war, and though much of the contents has been more recently discussed in technical journals relating to metallurgy and mining, the contents of this volume will be found of particular value to those engaged in the metallurgy of gold.

In the Transvaal the cyanide process had its first practical application, and nowhere else, probably, has it received such