

mixture in a current of hydrogen with potassium cyanide; the aqueous solution of the fused mass was then exposed to the air, which causes most of the tellurium to separate.

Gold, lead, and the traces of antimony and bismuth are determined by the ordinary methods.

NEW BOOKS.

SELECT METHODS IN CHEMICAL ANALYSIS, CHIEFLY INORGANIC, BY WILLIAM CROOKES, F. R. S., ETC., ETC.; EDITOR OF "THE CHEMICAL NEWS." Third edition, rewritten and enlarged; illustrated with sixty-seven wood cuts. London, and New York; Longmans. 1894. Price \$3.

This book is without padding and is but a bare, yet voluminous, statement of analytical fact. It is sufficiently explanatory to meet the wants of the average worker. It is minute in important details. It gives concise and clear, yet full, directions for separation and determination of all known elements, and has something to say of the hypothetical ones. And while but little is stated concerning those processes well understood by analysts, there is set forth about all which concerns the newer and verified ones. The book contains a skillful digest of the best of analytical literature down to the middle of the present year.

After the preface, come thirteen pages of index to captions. The next forty-two pages are given to potassium, sodium, lithium, cesium, rubidium, and ammonium, stating several methods for determination of each of them when found in various combinations. Chapter II relates to barium, strontium, calcium, and magnesium. The third chapter gives sixty-eight pages of the masterly digest of the literature pertaining to cerium, lanthanum, didymium, samarium, thorium, glucinum, the yttrium metals, titanium and zirconium. In all, there are 697 octavo pages of analytical methods and processes, followed by a copious index to subjects and to authors' names. There is little risk in stating that the advanced worker will here find, at least, something he did not before know regarding his own immediate field. The volume is invaluable.

The author has something to say to him who is constrained to use chemistry as the carpenter does his rule, and the least

possible of it; but he has a great deal more to say to him who desires a higher and better knowledge. He forgets how profoundly we are taught that matter is divided into common and rare elements. He keeps before him the necessity of giving to all forms of matter the same kind and quantity of study. Realizing that most rare elements are rare in quantity only, and that their distribution is indeed wide, he has given us the only English-written book to which workers in chemical and metallurgical technology can, under all circumstances, refer: workers whose necessities require that they shall be as familiar with many rare elements as they are with iron and with oxygen.

The great majority of American chemists regard Prof. Crookes as an honest and earnest and most consummate analyst. The small remainder, which does not so consider him, consists of those who do not know his work. One consults him with the comfortable feeling that his statements already are verified, that they have come out of his laboratory note-book, and that if possibly he should not give the solution of the problem in hand, he quite surely will teach enough to make the remainder apparent.

In the preface to this third edition, the author states that he desires the volume to be regarded chiefly as a collection of novel or little-known processes which have been found to be successful. He has not set himself the task of printing again that which may be found abundantly in special literature; except, that he has felt impelled to give to the world a series of electrical separations and processes. After a critical examination of the volume, the reader will emerge with a consciousness that the author kept to his assigned task and that his work was well done.

WILLIAM GLENN.

BALTIMORE CHROME WORKS,
October, 1894.

A CHEMICAL AND METALLURGICAL HANDBOOK. BY J. H. CREMER, M.E.,
and G. A. BICKNELL, B.Sc. pp. 280. Cleveland, Ohio: J. B. Savage.
Price, \$2.50.

This book contains 280 pages of information chiefly in notes and tables, which is of especial importance to iron chemists and metallurgists, and which any practical chemist or metallurgist