NOTES.

Note on the Decomposition of Alloxan.—I recently observed the notes of Professor Wheeler and Professor Bogert in THIS JOURNAL on "The Instability of Alloxan," **32**, 809, and it occurred to me that I should examin a specimen of 10 grams of alloxan which I obtained about a year ago from Kahlbaum.

The neck of the small glass-stoppered bottle was found to be coated with a fine, dry mass varying in color from white to deep red, in spots. This mass had, evidently, been forced out between the glass stopper and the bottle. On attempting to remove the stopper, I found it was firmly fixed in place and the bottle was finally opened by breaking off the neck. When the neck was broken there was a violent puff of gas showing that the contents of the bottle had been under considerable pressure, and it seems probable that if the bottle had not been opened at this time I might shortly have experienced such an explosion as Professor Wheeler reports.

In an examination of the contents of the bottle, a portion taken from near the bottom proved to be unchanged alloxan. The residue of gas in the bottle contained a large amount of carbon dioxide. Of principal interest, however, was the incrustation on the outer surface of the bottle, which was found to consist, chiefly, of urea, oxalic acid and alloxantin.

It would thus appear that the decomposition of alloxan, on standing, proceeds slowly and follows well-known reactions (see Liebig and Wöhler, *Ann.*, **38**, 359 and Strecker, *Ibid.*, **113**, 53) only reaching explosive violence when the carbon dioxide is unable to escape from the bottle. This observation is in accord with the suggestion offered by Professor Franklin, THIS JOURNAL, **32**, 1362.

ROSS AIKEN GORTNER.

THE CARNEGIE INSTITUTION OF WASHINGTON,
COLD SPRING HARBOR, N. Y.

NEW BOOKS.

Progressive Problems in General Chemistry. By CHARLES BASKERVILLE and W. L. ESTABROOKE. Boston: D. C. Heath and Co. 13 × 19 cm., pp. 243. Cloth. Price, $1.00.

This little work consists entirely of a list of problems in chemistry systematically arranged. These problems are in part collected from various sources and in part original. Uniform nomenclature has not been introduced in order that the student may become familiar with the various terms that are actually in use. The book contains quite a number of problems of the same type, so that a selection may be made and the book may be used for a number of years before solutions of the problems may be handed down from one class to another.

While on the whole the problems are well selected and clearly put, some of them are not sufficiently definit. For example, in problem 64, p. 53, "Find the volume of 10 g. N_2O; 13 g. NO; 7 g. N_2O_3; 6 g. N_2O_4," it ought to be stated under what conditions of temperature and pressure. The same is true of problem 53, p. 52, "Find the mass of 5.6 l. of CO;" also of problems 229 and 235, p. 184. It is probably intended that in working with gaseous volumes standard conditions are to be understood unless otherwise stated; but if so, a statement to this effect ought to be clearly made in some appropriate place.

To the teacher who finds that he can not devise problems in sufficient number for his class this book will be useful, though to be sure he would have to solve each of the problems himself so as to be able to check up the work of the pupil, for answers to the problems are not given in the book.

The volume is neatly bound in cloth and well printed.

LOUIS KAHLENBERG.

Introductory Notes on Quantitative Analysis. By C. W. FOULK, of Ohio State University. Published by the author. 239 pages. 2nd. ed. Price, $2.50.

This book differs from most books on the subject in that it is not devoted to a description of methods or examples of analysis. Over half of the book (130 pages) is given up to general and special directions on manipulation and the discussion of points which come up in quantitative work but which are usually omitted from books on the subject. Some of the points dwelt upon are: Weighing, fusions, precipitation, filtering, washing, sources of error, indicators, titration, normal solutions, calibration of volumetric vessels, etc., etc. While it is doubtful whether all of the explanations are explicit enough to be followed by a beginner, they will serve to call to his attention many points which are ignored by most books and will lead to a thoughtful consideration of the subject. The book is not intended to take the place of the instructor but to aid in giving the student a thorough grounding in the principles of quantitative analysis. The second part of the book (108 pages) is given to the directions for the analysis of fourteen examples. Whether the selection of these examples is the wisest is, of course, a matter for individual determination. Each example is taken as a type and is treated as such and not as an individual substance. Gravimetric, volumetric and electrolytic methods are discussed among the examples.

The contents of the book represent a year's work, classroom and laboratory, in quantitative analysis as carried out in the author's laboratory, and, as notes, have been used by him for a number of years. It is therefore thoroughly usable in all of its parts and will make a very satisfactory text book.

OWEN LOUIS SHINN.

Van Nostrand's Chemical Annual: Second Issue, 1909. Edited by J. C. OLSEN. New York: D. Van Nostrand Company. Price, $2.50 net.

The first issue of this valuable book has already been reviewed (THIS JOURNAL, **29**, 947 (1907)). In the present issue some new features are introduced, such as, for example, tables of the physical constants of the alkaloids and of the essential oils and a table of data relating to fusible alloys. In response to numerous changes in the accepted values of the atomic weights, the necessary recalculations have been effected. The tables of physical constants of inorganic and organic compounds, which are, of course, the most extensive single items, have not simply been reprinted. In common with all the other contents, they have been thoroughly revised, and have been largely modified by the inclusion of recently determined values. The selected lists of original papers and of books, which contain the titles of publications appearing since the first issue went to press (July, 1906), occupy over one hundred pages. No pains have been spared to bring the work up to date. The editor and publishers are to be congratulated on the well merited success which has attended the publication of the Annual. No chemist can afford to be without this edition.

ALEXANDER SMITH.

RECENT PUBLICATIONS.

AUSTEN, W. C.: **Introduction to the Study of Metallurgy.** Sixth edition. London: 8°, 494 pp., 18.50 M.

BÄCKLUND, A. V.: **Zur Theorie der Fluorescenz.** Berlin: R. Friedländer & Sohn. 30 pp., 1 M.

BAMBERGER, M.: **Ueber die Geschwindigkeit chemischer Reaktionen.** Wien: 8°, 60 pp., 2 M.

BAUER, F.: **Tabellen zum direkten Ablesen der Sudhausausbeute.** München: R. Oldenbourg, 130 pp., 6 M.

BAUMHAUER, N.: **Leitfaden der Chemie. 2 Teil. Organ. Chemie.** 4 Aufl. Freiburg: Herder'sche Verlagshandlung, 1.80 M.

BECKER, G. A.: **Ueber den Zusammenhang zwischen Farbe und Konstitution der Pyridinfarbstoffe aus sekundaren Aminen.** Dresden: Thomas & Hubert, 57 pp.

BÉHAL, A., AND VALEUR, A.: **Traité de chimie organique d'après les théories modernes.** Third edition. Vol. II, Fascicule I. Paris; 8°, pp. 1-560, Vol. I, 1908, 1136 pp., Prix de l'ouvrage complet, 2 volumes, 32 M.

BEMMELEN, J. M.: **Die Absorption. Gesammelte Abhandlungen über Kolloide und Absorption.** Dresden: Theodor Steinkopff, 12 M.

BEYSCHLAG, F., KRUSCH, P., AND VOGT, J. H.: **Die Lagerstatten der nutzbaren Mineralien und Gesteine.** 1 Bd., 2 Halfte. Stuttgart: Ferd Enke, 8.60 M.

Bibliographie der Biochemie u. Biophysik. Redigiert von C. Brahm u. L. Pincussohn; herausgegeben von E. Abderhalden. Berlin: 8°, Jahrgang 1 (12 Nrn), 12 M.

BRETTAUER, E.: **Beiträge zur Kenntnis der radioaktiven Stoffe.** München: 8°, 65 pp.