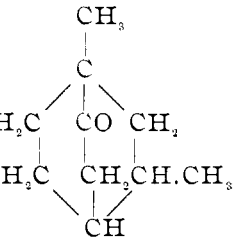
gize to Prof. Wiley for our neglect to refer to his work, and state that the unintentional omission was made because the presumably complete bibliographies consulted by us made no mention of these papers.

GEO. W. ROLFE,
GEO. DEFREN.

NEW BOOKS.

TRAITÉ DE CHEMIE ORGANIQUE D' APRÉS LES THÉORIES MODERNES. By A. BEHAL. Tome Second. pp. 1056. Paris: Octave Doin. Price 17 francs.

The general merits and excellencies of this work were pointed out in the review of the first volume;[1] these are maintained in the present and concluding portion. A clear demonstration of the structure of benzene is first given, so far as the presence of a closed chain and the number and nature of isomeric derivatives are concerned. Of the various expressions which have been suggested for its representation, Kekulé's is, after discussion, preferred. The section dealing with cyclopolymethylenes comprises 125 pages, of which 80 are devoted to the terpenes; this portion is fully equal to the high expectations inspired by the author's investigations in this field. The formula



is provisionally assigned to camphor for reasons given. It would have been well to have also shown Bredt's formula as a possible alternative. V. Baeyer's system of nomenclature is employed in this section, and also his plan of distinguishing isomers. In connection with the benzaldoximes, Hantzsch and Werner's theory of stereoisomerism is examined in detail and rejected on the following grounds: (1) It indicates the existence of stereoisomeric derivatives of trivalent nitrogen atoms, such as $C_6H_5CH:NC_6H_5$, which are unknown in spite of special efforts to obtain them. (2) It supposes that certain radicals in the molecule may both attract and repel one another without any previous

[1] This Journal, 19, 437.

chemical changes occurring in the compound. (3) It does not accord with the formation of two isomeric derivatives by the introduction of a radical into the molecule of β-benzaldoxime, although such compounds are known. The author represents α-benzaldoxime by the ordinary formula $C_6H_5.CH:NOH$, and the β compounds by one or other of the formulas $C_6H_5.CH.NH$; $C_6H_5.CH:NH$. Possibly these conclusions explain the absence of reference to Hantzsch's extension of his conception of stereoisomerism to diazo compounds, and of his controversy with Bamberger on the constitution of these and similar substances. As in the first volume, so in this, there are certain omissions which are difficult to understand, and which it would appear hard to justify ; for example, Claisen's name is not recorded in connection with the isoxazoles, nor is reference made to his work and Nef's on the constitution of di- and triketones, such as dibenzoylmethane and tribenzoylmethane, which are simply represented by the keto formulas, nor is the isomerism which has been observed in this series of compounds mentioned. The alkaloids are classified according to the plant from which they orignate ; in the present state of our knowledge this is decidedly commendable, but the omission of W. Kœnig's name in connection with the quinine group, and of Schunk's in connection with chlorophyll, is scarcely equitable, whilst A. G. Perkin's investigations of the constitution of natural coloring matters has not been confined to mallotoxin (rottlérine), as might be inferred. The "salt formation" is given in explanation of the action of phenol phthaleïn as an indicator. The electrolytic dissociation theory offers a much more probable solution of the phenomena. The volume concludes with a copious index to both parts of the work.

J. B. T.

BOOKS RECEIVED.

Commercial Fertilizers. Special Bulletin, May, 1897. H. A. Huston, State Chemist, Purdue University, Lafayette, Ind. 8 pp.

1. General Discussion on Commercial Fertilizers. 2. Analyses of Fertilizing Materials sent on for Examination. 3. New Fertilizer Law.