

however, that the author goes too far when he deduces the gas laws from the kinetic theory of gases. Under no conceivable circumstances can such a deduction be of value to a freshman.

It is not true as stated on p. 20, that "a saturated solution contains the maximum amount of material which will dissolve at the given temperature." There is some question also as to the accuracy of the statement on p. 21 that "excessive solubility of a gas in a liquid is due to chemical action." Such a statement is certainly out of place in a text-book for freshmen. The effect of environment appears on p. 90. Nowhere outside of the Yale laboratory would the double bromide of caesium and lead be cited as a typical well-known double salt. So long as there is any possibility of the student learning the facts in regard to potassium nitrate and sodium nitrate, the reviewer believes that it is dangerous to lay too much stress on the quantitative precipitating action of the common ion. The reviewer is naturally hopelessly out of sympathy with the statement on p. 114 that "obviously the phase rule is chiefly important as an instrument for indicating the numerical relation between the number of components and the number of phases, which must characterize this preeminently definite condition of equilibrium." It would have been more accurate to have said that the phase rule is chiefly important as a basis for classification and as an instrument of research.

Wilder D. Bancroft.

Die englischen elektrochemischen Patente. By P. Ferchland. *Auszüge aus den Patentschriften (Monographien über angewandte Elektrochemie XXXII. Band), Zweiter Band: Elektrothermische Verfahren und Apparate; Entladungen durch Gase.* 17 × 23 cm; pp. 190. Halle: Wilhelm Knapp, 1908. Price: paper, 9.50 marks.—The first volume (12, 648) contained only those patents relating to electrolysis. This volume contains the electric furnace patents and those on electrical discharges through gases. The book contains practically all the patents granted up to the end of 1906 and also nearly all of those for which application was made during 1907. The book is distinctly valuable for reference. Some names are mis-spelled as Thompson for Thomson, and Brindlay for Brindley; but such mistakes as these do not shake one's confidence in the general accuracy of the text.

Wilder D. Bancroft.

Elektrolytische Zähler. By Konrad Norden. (*Monographien über angewandte Elektrochemie, XXXI. Band.*) 17 × 24 cm; pp. ix + 166. Halle: Wilhelm Knapp, 1908. Price: paper, 9 marks.—An electrolytic meter can only measure current and we cannot get kilowatt hours from it unless we postulate a constant voltage. For this reason and also for others, the electrolytic meter, though first in the field, is now of relatively small importance. The author estimates that only about five percent of the meters in Europe belong to this type. No figures are given for the United States; but it is pretty certain that the electrolytic meter is a negligible item in this country.

The author believes that there may perhaps be a commercial future for some form of the electrolytic meter and he has written this book to show what has been done in this line. It is a valuable compilation and it is always interesting to know how a problem has been attacked even though the problem itself may have more of a past than a future.

Wilder D. Bancroft