

say, 1'3333, we can write down 1'33333, which is greater. *Therefore it must be x!*"

It is only fair to add that this unlucky paralogism seems to be a solitary blemish in an otherwise excellent book.

G. B. M.

A Manual of Surgical Treatment. By W. Watson Cheyne, F.R.S., and F. F. Burghard, M.S., Surgeons to King's College Hospital, London. In six Parts. Part I. Pp. xiv + 285, with 66 illustrations in the text. (London and Bombay: Longmans, Green, and Co., 1899.)

SUCH a work as this has long been wanted by senior students, house-surgeons and general practitioners, who are often left in charge of capital operations performed by surgeons of repute without any precise directions as to the treatment to be adopted in cases of emergency. But the work undertakes much more than this, for it is evident that the authors will review the whole field of surgery in the light of our present pathological knowledge, showing the modern methods of treatment and explaining why they have replaced the older plans. The present part deals with the more general subjects of inflammation, gangrene, wounds, venereal disease, tuberculosis and tumours. It treats, therefore, of those parts of surgery which, perhaps more than all others, have been affected by antiseptic treatment. Mr. Watson Cheyne is so well known as one of the most distinguished pupils of Lord Lister that no better exponent of his methods could be found, and we are here presented with a clear account of the rationale of modern treatment. Thus, amongst many other more important things, we learn why poulticing is bad in the treatment of abscess, why a chronic abscess should be scraped, but an acute abscess should only have the matter let out and the loculi broken down. The facts and reasoning are excellent, but the pleasure of reading is too often marred by the form in which they are presented, as many of the sentences seem to be constructed upon a German model. The figures which illustrate the letterpress vary greatly in quality; some are excellent, others are sketchy, whilst others again are such mere outlines as to be almost unintelligible. Dr. Silk contributes an excellent article on the subject of anæsthetics, and there is a good index to this first part of the work.

Impressions of America. By T. C. Porter, M.A. (Oxon.), Fellow of the Chemical Society, of the Royal Astronomical Society, and of the Physical Society of London. Illustrated with diagrams and stereoscopic views. Pp. xviii + 242. (London: C. Arthur Pearson, Ltd., 1899.)

THE impressions were obtained during a pleasure trip to Niagara, the Yellowstone Park, San Francisco, the Yosemite, Utah and Colorado Springs. The author refrains from citing any of the scientific work dealing with the remarkable features of those interesting regions, but gives a graphic account of what he himself saw, and outlines a number of interesting hypotheses to account for some of the phenomena. Some of these are interesting because they show how a man of scientific habits of thought may from a hasty glance often reach conclusions very similar to those which the specialists who have studied the subject for years have demonstrated to be correct. We cannot accept Mr. Porter's ingenious hypothesis that the spiral ridges of the trunks of many trees in the Yellowstone Park are due to unequal heating by the sun and the uniform rotation of the earth, because he does not buttress it with the necessary explanation why trees in other places in the same latitude where the sun also shines unequally and the earth rotates uniformly do not also incline to a screwy form. But the little appendix on the Gulf Stream is a neat demonstration from the study of a single bottle-chart of the seasonal

variation of the Gulf Stream and its attendant drift. Of course the deduction is not new; the fine charts of North Atlantic currents grouped for two-monthly intervals by the Meteorological Office bring it out perfectly, and the labours of American, British, and Scandinavian oceanographers, and of the Prince of Monaco, have done much to find the reasons for the observed variations. We might venture, however, to remind Mr. Porter that the course of the Gulf Stream shown on a single small scale map is as conventional and empirical a representation of oceanic circulation as the isotherms on a map of mean annual temperature are of the climates of the world. The generalisation in no way implies that the seasonal changes are unknown.

A new theory of geysers to fit the phenomena of the Yellowstone Park is also printed in the appendix in the form of a paper read to the Physical Society. It points out defects in Tyndall's well-known theory, and introduces a syphon-bend in the underground channel and the spheroidal state induced by the intense heat of the rocks as more probable explanations.

The great merit and the unique character of the book depend, however, not on the author's impressions or his theories, but on the incomparable series of photographs which he took. These are reproduced in the form of stereoscopic views, and a neat little lenticular stereoscope is supplied with the volume. The views shown in these illustrations are admirably selected and splendidly photographed. They are reproduced by the half-tone process as separate plates, and very well printed. As a diary of the observations of a man of science at leisure there is much of interest in the whole book, which has also the advantage of being brief.

H. R. M.

Tables for Quantitative Metallurgical Analysis for Laboratory Use. By J. James Morgan, F.C.S., Member Soc. Chem. Industry, Member Cleveland Inst. Engineers. Tables xvi. (London: Charles Griffin and Co., Ltd., 1899.)

TABLES for qualitative analysis are to be found in every chemical laboratory, and are used by every analyst at one time or another. Any attempt to supply chemists with information on quantitative analysis drawn up in the same convenient form must therefore be welcome. The present collection of tables has been carefully prepared, and is well arranged. It includes the analyses of iron ores, steel, limestone, boiler incrustation, certain slags, gaseous fuels, water, coal, and a few of the common metals and alloys. Alternative methods are not given, but the tables will be found very useful in saving the time of an analyst engaged in the examination of materials with which he is not accustomed to deal in the ordinary course of his daily work.

LETTERS TO THE EDITOR.

[The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts intended for this or any other part of NATURE. No notice is taken of anonymous communications.]

Tides of the Gulf and River St. Lawrence and Bay of Fundy.

PERMIT me to invite your attention to the latest report of the engineer in charge of the survey of the tides and currents of the coast waters of Canada, Mr. W. Bell Dawson, a copy of which has been addressed to you.

This survey, commenced by the Government of Canada in 1894, is of great importance, not merely in the interest of hydrographical science, but of the large and increasing trade which finds its way along the gulf and river St. Lawrence, the greatest water-way from the North Atlantic into the northern part of the American continent, and which, like all