Practical Physiological Chemistry. By J. A. Milroy, M.A., M.D., and T. H. Milroy, M.D., B.Sc., F.R.S.E. Edinburgh and London: William Green & Sons.

This work is a welcome addition to the comparatively small number of text-books on Physiological Chemistry in the English language. It is essentially a hand-book for directing the student in practical work; the authors in their preface state that it is intended to serve as a guide to junior students attending a course of practical physiological chemistry of approximately three months' duration. It covers far more ground than is usually required of junior students, and a mastery of its contents would suffice to give one a very good working knowledge of the subject; it will be found very useful to the senior student as well as the junior. The material is well arranged and clearly stated, and is also very well adapted to the needs of the clinician. The section on the urine is especially good. After dealing with its normal constituents and their detection, the authors take up the consideration of pathological constituents, and finally go very minutely into the quantitative estimations of the various substances found in health and disease; these methods are fully explained, and examples carefully worked out are given as illustrations. More than one method is frequently dealt with, thus in the estimation of uric acid that of Ludwig as modified by Salkowski is taken as the standard process and fully described, but the more usually employed method of Hopkins is given the first place.

The book appears to be a large one when first taken up, but this is more apparent than real, for between each sheet of printed matter is a blank sheet on which notes can be made, and there is a somewhat large number of blank pages at the end. This system of interleaving may not commend itself to all, but is certainly very useful to the student who is systematically working through the book; it makes it less easy to look up as a work of reference. The omission of a number of blank pages especially in the appendix and certain other places where they are not required, would be an improvement.

The text is admirable throughout, and is divided into three sections: qualitative, quantitative, and appendix. The sections are sub-divided into chapters under natural headings, which greatly facilitates reference. No attempt has been made to divide it into daily exercises, and rightly so, for these must vary greatly, and would tend to interfere with the compactness of the work. Theory has been for the most part excluded except where essential for the explanation of the methods employed. All the tests and practical directions bear evidence of having been carefully rehearsed by the authors, and where there is difficulty or uncertainty in the carrying out of any method, it is frankly so stated and explained. In Chapter VII., page 45, it would be better perhaps if the actual colour reactions resulting from the mixture of different solutions with colour reagents were stated; as it is, the student is left to note them himself. The part of the book treating of the spectroscopic examination of the blood pigments is particularly good, and contains
many useful points in their preparation which are not to be found in any other work; the spectra charts, too, are well reproduced. Altogether, the book will prove of great service both to the student and the clinician.

A Short Treatise on Anti-Typhoid Inoculation, containing an Exposition of the Principles of the Method and a Summary of the Results achieved by its Application. By A. E. Wright, M.D. Westminster: Archibald Constable & Co. Ltd.

This is an amplification in book form of a series of three papers recently contributed by the author to The Practitioner. The general principles of immunisation are first of all briefly discussed, their application to the particular problem of producing immunity to typhoid fever, and the technique and clinical effects of anti-typhoid inoculation are dealt with, and lastly there is a chapter devoted to the practical results of anti-typhoid inoculation as disclosed in the statistical records. An appendix gives a detailed description, with illustrations, of the procedure employed for preparing and standardising anti-typhoid vaccine.

The author regards the faculty of immunisation as a physiological entity, and the machinery of its production as a purely chemical one, but does not enter upon the theories of the explanation of the mechanism. He gives a very lucid account of the principles of immunisation, and of how they have been evolved.

Great stress is laid on the important fact that the success of an inoculation process depends not only upon the selection of an appropriate vaccine, but even more on the knowledge by the operator of the general features of the reaction of immunisation. After inoculation there is always a negative phase, during which the blood is impoverished in anti-tropic substances, and there is an increased susceptibility of the organism to infection. This is followed by a positive phase with high immunity, which diminishes somewhat, but remains permanently increased. A second inoculation, falling on the negative phase of the first, gives rise to cumulation in the direction of the negative phase, and sets up a condition of cumulative susceptibility. To produce cumulation of immunity, the second inoculation should fall on the positive phase of the previous dose.

The author recommends sterilisation at a temperature of 60° C. of a recent culture of typhoid bacilli in 1 per cent. peptone broth as affording the best and safest material. Standardisation is performed by actual enumeration under the microscope, the methods employed being fully treated in the appendix. The dose for inoculation is on the first occasion a quantity of fluid containing 750 to 1000 millions of bacilli, and double that amount for the second. Subcutaneous injection was the method adopted; in a few cases internal administration was tried, but though not without action, proved uncertain.

In his preface the author mentions that his work in connection with anti-typhoid inoculation in the army included the inoculation of 4000 British soldiers in India, and the supply of some 400,000 doses of anti-typhoid vaccine during the South African war, work all given gratuitously. The statistics furnished by these inoculations are carefully
gone into, and the numerous sources of error shown; but the author has good ground for believing that they conclusively prove the value of inoculation. In the inoculated the subsequent occurrence of the disease was one-half only of what it was in the uninoculated, and frequently much less; while of those who subsequently developed the disease after inoculation fewer died in the same proportion.

The book is a very valuable contribution to medicine, is clearly written, and easily followed.

**Nothnagel's Practice: Diseases of the Stomach.** By F. Riegel. Edited, with Additions, by Charles G. Stockton, M.D.

**Diseases of the Intestines and Peritoneum.** By Professor Dr. Hermann Nothnagel. Edited, with Additions, by H. D. Rolleston, M.D., F.R.C.P. Authorised Translation from the German, under the Editorial Supervision of Alfred Stengel, M.D. Philadelphia and London: W. B. Saunders & Co.

The first of these volumes contains only 825 pages, the second 1032, including in each case the index, giving a total of 1857 pages entirely devoted to diseases of the stomach and bowel, excepting for a couple of hundred pages or so, devoted to peritoneal affections.

The fact that the authorised translation from the German of Professor Nothnagel has been performed under the supervision of Alfred Stengel is a criterion that the work has been well done. Of course, as the work has been published in America, some of the spelling is peculiar in our eyes. This is not the place to enter into a controversy as to the American methods of spelling British words, and although it has probably been objected to before this by other writers, we confess that we cannot understand how a chloride or an oxide should have their terminal e's cut off, thus bringing them into line with the word acid.

The first part, the part relating to the stomach, deals with general diagnosis and treatment. It commences with a very good description of the physical methods of examination, following this up with a very compendious description of the characters of the stomach contents, and the methods of analysing the same. Proceeding, the author deals with the treatment of stomach diseases in general, and we are glad to note that he is not one of those who swear by the use of artificially prepared peptones and albumoses. He undoubtedly ascribes to these preparations a certain value, under certain circumstances, but does not attribute to them the wonderful efficacy which their makers and some physicians are disposed to accord them. With regard to the vexed question of lavage of the stomach, the author takes up a very reasonable position, although we are not quite sure whether the inoculation of a habit, or rather the power, of washing out the stomach, by the ingestion of large quantities of plain water, and its subsequent expulsion without the aid of a stomach-tube, is not better, we quite recognise the force of the author's argument contained in the following paragraph:

"The stomach is one of the organs whose function is periodic, consequently it needs intervals of rest. This applies to the healthy stomach, and, of course, with greater force to the stomach when it is diseased. One of the best ways to create favourable conditions for the cure of
any disease of the stomach is to place the organ at rest for some time.
Assuming, even, that we remove valuable nutritive material from the
stomach, by performing lavage in the evening, we are not certain whether
or not the retention of food injures the diseased organ. We can, at all
events, readily compensate any waste of food which may occur—that is
simply a question of expense; as a matter of fact, we replace this loss
at once by introducing new food into the stomach, after it has been
thoroughly cleansed. Under these conditions, the food eaten is more
thoroughly utilised than if it is given on top of old and partially
fermented food."

The volume connected with diseases of the stomach can be recom-
ended to all practitioners who wish to become conversant with the
most modern ideas about that organ and its treatment, the more so that
the original text has been added to by the American editor.
Not long ago we had occasion to notice Professor Hemmeter’s work
upon the diseases of the bowels. The second volume of the monographs,
translated from the German under the editorship of Dr. Stengel, seems
to be rather superfluous, treating as it does of the same subject, but not
nearly so fully.
There is certainly a great difference in the methods employed by the
two authorities, in their clerical descriptions of intestinal and peritoneal
conditions.
The second portion of “Nothnagel’s Practice,” as edited by Rolleston,
certainly suffers from the great number of editorial additions included
in its pages, for in many places they do not run harmoniously with the
text. Of course, it is difficult to render into English, German literature;
It seems, however, to be even more difficult to translate the Teutonic
language into American. It would be hardly worth while to investigate
the changes of tense which occur so frequently throughout the volume,
and which so aggravate any one reading it who happens to have a sense
of tense.

NOTES ON BOOKS.

GOULD’S Year-Book; “Surgery” for 1904 (London: W. B. Saunders & Co.),
presents a comprehensive survey of the year’s work in surgery. The
general arrangement and size of the volume are the same as in the
issue for 1903, but the increased number of plates and illustrations
in this year’s issue make it even more valuable than its predecessors.
Many of the novel surgical methods referred to, which would have been
difficult to describe intelligibly in an abstract, are rendered clear by
good illustrations. We note that, although American work occupies a
large part of the Year-Book, English, German, French, and Italian
writers are well represented, and readers of the Year-Book may, we
think, feel confident that no work of interest or importance fails to
receive notice in this carefully edited survey of current surgical
literature.

The ordinary man in the street, who does not think it worth while
to read any of the Government’s official publications, supposing that
they are all as dry as dust, would be much surprised to find that some