reading. Thus, at p. 105, we do not understand what is meant by saying, "In this way the cells of micrococci are coloured blue."

Notwithstanding the defects we have drawn attention to we have no doubt that the volume will prove very useful to practitioners, both by helping them to form an accurate diagnosis, and to recommend appropriate treatment, in the different cases of phthisis pulmonalis with which they may be called upon to deal.

The Inhalation Treatment of Diseases of the Organs of Respiration, including Consumption. By ARTHUR HILL HASSALL, M.D. London: Longmans, Green, & Co. 1885.

It would be unlikely for a man of Dr. Hassall's undoubted talents to produce a volume altogether without originality; but it is not often we fall upon a work so completely based upon personal observation and painstaking experiment as that now before us. Inhalation as a means of applying remedies, either directly to the respiratory tract, or for the purpose of producing a more extended action upon the system generally, is a subject which is daily demanding more and more the attention of the practitioners of this country. During the past few years the inhalation of medicated vapours in lung affections has been somewhat extensively employed; but in how many cases with disappointing results! How many enthusiastic practitioners have eagerly watched for the beneficial effects which they were led to expect would follow the inhalation of creasote or carbolic acid in pulmonary affections, and how many have put aside the inhaler as utterly useless? The cause of these disappointing results would seem to be a want of appreciation of the principles which govern the application of the substances most commonly employed, and of the proper methods of using the various apparatus devised for this purpose. This has resulted mainly from the want of a book, giving, in a clear and concise manner, the points to be borne in mind in employing inhalation treatment in diseases of the organs of respiration. Dr. Hassall's work supplies this need, and seems likely to advance that department of medicine which he has so carefully and ably investigated, and in which he takes so much interest. With extended knowledge of the real capabilities of this method of treatment,

it is to be hoped that results more satisfactory and encouraging than heretofore will be attained.

Dr. Hassall treats his subject in seven chapters:—I. On the entrance of Medicaments into the Organs of Respiration; II. On the Principles concerned in the Volatilization and Inhalation of Medicines; III. On Apparatus; IV. On Inhalation Chambers; V. On the Quantities of Medicaments to be employed in Inhalation, and on the Manner, Frequency, and Duration of the Inhalations; VI. On the Medicaments employed in Inhalation; VII. On the Inhalation treatment of Diseases of the Organs of Respiration.

In the first chapter the author gives the details of a number of experiments which he conducted with the view of ascertaining the quantities of carbolic acid, &c., which presumably reach the lungs during the use of the oral and oro-nasal inhalers. From these experiments it would appear that substances of little volatility at ordinary temperatures, such as carbolic acid, creasote, and thymol, make their way into the lungs with difficulty, and in very minute quantities only, while substances with a considerable volatility, as eucalyptol and oil of turpentine, do not always find a ready access. A few pages farther on the author cites experiments in proof of a matter which has often struck us, namely, the uselessness of prescribing for inhalation, by the vapour of hot water, such non-volatile medicines as preparations of opium, hyoscyamus, and many other medicinal substances.

The author is of opinion that the doses of medicaments usually prescribed are far too small to benefit the patient materially. He says—"For the treatment to be successful, it is necessary that it should be conducted systematically and thoroughly, and that it should also, in the majority of cases, be constitutional as well as local. In fact, when antiseptic remedies such as carbolic acid and creasote are employed, the system should be brought under their influence to such an extent that the renal secretion gives evidence of their presence."

In chapter second the author shows experimentally how substances little volatile at low temperatures gradually increase in volatility as the temperature rises, and that the volatility of these substances is further increased as the evaporating surface is extended. Evidence is also added to show that while the volatility of such substances as phenol and thymol increases *pari passu* with the volatility of the dissolving medium, yet this principle is not altogether applicable in practice to oral and oro-nasal respirators, on account

of the solvent being very rapidly driven off from the sponge, and leaving the medicament behind.

Chapter IV, on Inhalation Chambers, while of little interest to most ordinary practitioners, cannot fail to be of the greatest interest and importance to the hospital physician, who is more likely to have opportunities of employing them. We trust that hospital authorities in this country will see their way to provide such apparatus for the inhalation of compressed and rarified air as forms part of the ordinary furnishings of most continental hospitals.

It seems to us that the work has been extended beyond its legitimate limits by the insertion of chapters VI and VII, which occupy over two-thirds of the entire volume. Chapter VI is really a short treatise on *Materia Medica* and Therapeutics, which might with advantage have been reduced to tabular form. Chapter VII, which treats of Practice of Medicine, might have been considerably curtailed.

Taken as a whole, the work which Dr. Hassall has last contributed to medical science cannot be too strongly recommended to the notice of the profession, both on account of the sound practical information it contains and the value of the close scientific research manifested in its pages.

Operative Surgery in the Calcutta Medical College Hospital: Statistics, Cases, and Comments. By KENNETH MACLEOD, A.M., M.D., F.R.C.S.E.

FOLLOWING the example of his illustrious predecessor, Sir Joseph Fayrer, the author has collected and recorded, in the form of a handsome volume, his experience during the years 1879-83 as surgeon to the Calcutta Hospital. In a few well chosen introductory remarks, Dr. Macleod states his reasons for bringing before the notice of the profession the result of his practical experience, showing wherein advantages are most likely to be derived, and wherein also, without certain considerations, fallacious conclusions may be drawn. Thus, the feeling is at once engendered in the reader's mind of the truth which may be ascribed to subsequent statements; and that, too, especially with regard to statistics, of which several tables are given, since the author is as fully alive to the possibility of false inferences as to the true value which may be rightly attached to them. The second chapter might be