A System of Surgery, Theoretical and Practical, in treatises by various authors. Edited by T. Holmes, M.A. (Cantab.), and J. W. Hulke, F.R.S. Third edition; in three volumes, with illustrations. London: Longmans, Green & Co. 1883.

(First Notice.)

This edition, though really considerably enlarged, is presented in much smaller compass than the last, five volumes having been compressed into three, of about 1,000 pp. each, with a view to lessening the price of the work. The gain in cheapness is considerable and acceptable; but, though the type is good, the smaller print on the cheaper paper is not so easily read, and the larger pages tire the eyes. The binding is not so substantial as might be wished for books of considerable size, subject to frequent handling, but here also something has evidently been intentionally sacrificed.

As indicated, there is actually more matter in these three volumes than there was in the five of the last edition. One essay, that on Hospitals, has been omitted, and "the matter of that on surgical instruments has been distributed amongst the other articles;" but nearly all of the articles have been extended during the process of revision, and many woodcuts have, with advantage, been introduced. There are also some full page plates—four showing the microscopic characters of scrofulous tissues; two coloured, of ophthalmoscopic appearances; and three, also coloured, illustrating the article on Venereal Diseases. These latter are, as usual, with medical chromo-lithographs, very "telling" from decided colouring, and very conventional rendering of flesh tints.

The greater part of the first volume is devoted to general surgical pathology, and comprises the following articles:—Inflammation; Pathology of Inflammation; Abscess; Sinus and Fistula; Gangrene; Ulcers; Erysipelas; Pyæmia; Hectic and Traumatic Fever, and Treatment of Cases after Operation; Tetanus; Delirium Tremens; Scrofula; Hysteria; Tumours; Contusions; Wounds; Animal Poisons; Wounds of Vessels; and Collapse. Probably the best article here, and perhaps in the whole book, is that on Pathology of Inflammation, by Dr. Burdon Sanderson; it is very complete, giving lucid descriptions of all the most important series of experiments bearing on the subject, and concludes with a most useful bibliographical list from 1871 to 1881, inclusive. Dr. Burdon Sanderson
defines inflammation as "the succession of changes which occurs in a living tissue when it is injured, provided that the injury is not of such a degree as at once to destroy its structure and vitality." This definition, an ætiological one, he prefers to the classic semeiological one so generally adopted since the time of Celsus, as indicating more correctly that "inflammation is a process, not a state;" but it is in no sense descriptive, and in that respect is defective. By those who already know what the "succession of changes" is, the definition will at once be accepted as both definite and comprehensive; but to a junior student, it would convey no notion of what the succession consists in. Nothing, however, can be more admirable than Dr. Burdon Sanderson's expositions of the changes and of their causations. He classifies inflammations, "according to their mode of origin, into primary and secondary. The first term is applicable to all those cases in which the local process is the direct result of the operation of a noxa on the organ or tissues in which the inflammation has its seat. The second includes the important class of infective or secondary inflammations, . . . . defined as dependent on the introduction, from a part previously inflamed, of an infective particle or particles into the circulating blood, and its lodgment in the capillary blood-vessels of the part secondarily infected." (P. 66.) Under the heading of Proximate Causes of Traumatic Inflammation, he says (p. 83)—"It is now regarded as certain by pathologists, that minute organisms are concerned in all the more serious pathological effects of injuries. With reference to the mode and degree of their interference, three propositions may be referred to as embodying the conclusions arrived at by different observers and thinkers—viz. (1.) That when inflammation of a living part is determined by an injury, the injury acts only as a predisposing cause—the proximate cause is the presence of organisms. (2.) Inflammation may be produced without the concurrence of organisms; but in this case, the process is neither progressive nor infective—that is, it neither tends to spread to contiguous parts beyond the area of injury, nor to infect distant parts by the circulation. (3.) The organisms which produce these results exist constantly in surrounding media." After describing and discussing the experiments and observations of Hueter, Hallbauer, Chauveau, Koch, and Ogston, he comes to the conclusion that "for the propositions (1) and (2), there are good reasons which deserve the most serious consideration"; but, (3), known as the "atmospheric germ theory," he thinks "rests on much more slender foundation." Special, though perhaps common, conditions are required
to “enable the air to act as if it were charged with poison;” and, as shown by Wegner's experiments on the peritoneum, the conditions consist in the presence of dead or putrescible fluid or tissue in contact with living tissue, but accessible to atmospheric germs, and the continuation of that contact for a certain time after the process of putrefaction has been initiated by these germs. The phenomena of infective periostitis and ulcerative endocarditis, again, he thinks, can only be explained by the theory “that the micrococci or their germs are always or usually present in the organism; that in normal tissues they find no subsistence and disappear, but that spoilt tissue not only allows them harbour and lodgment, but the opportunity of exercising their special function or endowment—viz., the exciting of septic changes.” Why these changes should be excited in some cases only “is just as undetermined as if micrococci had never existed.” “What we know about them (micrococci) pathologically, may be thus summed up. That they are undoubtedly associated inseparably with the propagation of distinctive inflammation by dissemination; that, whether they borrow their virulence from the medium in which they live, or acquire it by a process of gradual adaptation (that is, by virtue of reciprocal action of organism and environment on each other), it is not to their inherited properties, but to the circumstances under which they have vegetated, that they owe their unquestionable pathological importance.” (P. 96).

It is very interesting to compare Dr. Sanderson's article with Mr. Simon's (on Inflammation), which stands nearly as he wrote it in 1860, with only the vaguest references to "ferments," and with his note to that article, written in 1870, where he points out the suggestiveness of certain (then) recent experiments on the habits of "supposed noso-fungi."

Perhaps the question in the domain of pathology that is at present most attractive concerns the relationship of microorganisms to disease. Any one, however, wishing to "read up" this subject in the "System" will obtain but an imperfect idea of the extent to which it has been wrought out experimentally, and not much aid in the way of detailed references to the literature of the subject. Whether or not this subject is worthy of a special article was for the editor to decide on various grounds; but in a work of this kind the writers of many of the articles, as they stand, might have made their articles much more valuable by giving references much less general. Many of the views at present under discussion may not bear the test of more extended observation or fuller
experience; but the state of the question, as it is at present, might have been much more distinctly indicated. The "germ theory," as a general principle, is certainly fairly stated in more than one of the essays—e.g., in Mr. Holmes', on Inflammation (Treatment), vol. I, p. 41, in Dr. Sanderson's, referred to above, and in Mr. Croft's, on Antiseptics, vol. I, p. 317; but very little detail is given where more specific affections are concerned. In fact, the idea of specificity with regard to micro-organisms is very imperfectly indicated, or even denied, as in the above quotation from Dr. Sanderson. In the articles on Erysipelas, Hydrophobia, and Anthrax, the question is little more than alluded to; in Mr. Treves', on Scrofula, it receives but scant attention, Koch's discovery having only a foot note of two lines devoted to it; in those on Lupus (by Paget, under Ulcers, and by Jenner, under Skin Diseases), and in those on Leprosy, Syphilis, Gonorrhoea, and Diphtheria, it is not mentioned at all. In the article on Abscess, Koch's observations are given; but Ogston's are not, though they are mentioned in Dr. Sanderson's article. Similarly the defect in the articles on Scrofula, and on Scrofulous Disease of Bone, will be found well atoned for by Mr. Barker, in his article on Caries of the Spine.

Closely associated with this pathological question is the therapeutic one of antiseptic dressings, and to this subject we think full justice has not been done. The successful employment of the Listerian method depends wholly upon strict attention to matters of detail, but details here are mostly conspicuously wanting. The influence of Mr. Holmes' opinions can be plainly traced in many places. In "Inflammation—treatment" he states and criticizes the theory fairly enough from his point of view; but in "Excision of Joints" he dismisses the subject very curtly. Over the great battle ground of Listerism—namely, Operations upon the Abdomen, Mr. J. Hutchinson, in his article on Surgical Diseases of Women (vol. iii), gives but a hurried glance, concluding his remarks as follows:—"If we put aside the extra-peritoneal method with the pedicle and the carbolic spray during the operation, neither of them having maintained a permanent position as improvements, we may, I think, briefly mention the following as having been the most important in conducing to the results which we have witnessed. The first is the fact that ovariotomy has, to a large extent, fallen into the hands of specialists, whose skill and knowledge have become developed by constant practice. It may be doubted whether the statistics of ovariotomy at the present time, at general hospitals or in the hands of those who do the operation only very occasionally, is much better than it was in
the days of Walne, Frederick Bird, and Baker Brown. Secondly, surgeons have learned to do the operation deliberately, and that prolonged exposure of the peritoneum is not a matter of any consequence as compared with the risk which results from having either blood or cyst fluid in the abdominal cavity. Thirdly, it has been made quite certain that the peritoneum does not resent the presence of ligatures cut short and left within its cavity. This applies not only to ligatures on the pedicle, but to those used to prevent haemorrhage from torn adhesions, and we now most scrupulously tie every bleeding point and cut the ligatures short. Fourthly, we may cite, as minor matters which have been occasionally useful, the employment of glass drainage tubes passed down into Douglas’s pouch, and the use of the ice-cap in cases of unusual pyrexia. Undoubtedly the most important of what we have mentioned are the practices which are summed up in the expression, ‘Toilet of the Peritoneum’” (p. 417). For all this, he does not “think that the use of Listerian precautions can be safely neglected by those who operate in general hospitals.”

The special article on Antiseptic Dressings in this edition is placed at the end of the article on Wounds instead of that on Amputations, but that has given it into the hands of Mr. Croft instead of Prof. Lister’s. Mr. Croft’s article is very sketchy and sadly lacking in details, and Mr. Jacobson’s descriptions in his article on Compound Fracture (I, p. 431) will be found much more useful. In the articles on Herniotomy, and Penetrating Wounds of the Abdomen, no hint of any special value of antiseptics is given, and in that on Gun-shot Wounds, though the antiseptic system is recommended in general terms for adoption as far as possible in military surgery, no information is given as to the various modifications of detail which have been suggested to make it possible during active service. Of the more recent antiseptics, iodoform is the only one that receives attention ; its use in cases of compound fracture, abscess, and in operations about the mouth is fully described, and its special advantages as an antiseptic are stated by Mr. Croft; but we find nothing about its use in cases of gonorrhoea, suppurating chancre, or phagedænic ulcer, though it is as useful and as antiseptic in its action in these cases as in any of the others mentioned.

The second part of the first volume is occupied with a series of articles on special injuries of various parts of the body, which are full and satisfactory. A strong point of excellence in the work, as a whole, is the fulness and practical usefulness of the articles on what are often called “specialties”—e. g.,
affections of the eye, of the ear, of the larynx, &c., which greatly enhance its value as a work of reference for general practitioners.

Some of the more interesting of the articles in the second and third volumes we propose to refer to in a future notice. In the present notice we have referred to what we consider to be defects; but the work is already well known as a valuable one, and its value increases with each edition. It does great credit to the editors and to the writers of the various articles.

Vorlesungen über allgemeine Pathologie: Ein Handbuch für Aerzte und Studirende. Von Dr. Julius Cohnheim, Zweite neu bearbeitete Auflage. Zwei Bände. Berlin: August Hirschwald. 1882.

Lehrbuch der Pathologischen Anatomie. Von Dr. F. V. Birch-Hirschfeld, Zweite völlig umgearbeitete Auflage. Erster Band. Allgemeiner Theil, mit 118 Abbildungen im Text. Leipzig: F. C. W. Vogel. 1882.

A Text-book of Pathological Anatomy and Pathogenesis. By Ernst Ziegler. Translated and edited for English Students by Donald Macalister, M.A., M.B. Part I. General Pathological Anatomy. London: Macmillan & Co. 1883.

The publication of these three works on Pathology and Pathological Anatomy within a short period, shows that this subject is, in Germany, being pursued with unusual vigour. We have in the first place a second edition of Cohnheim’s well known lectures on General Pathology in two bulky volumes. Then we have the first or general part of the second edition of Birch-Hirschfeld’s work on Pathological Anatomy. We have lastly an English translation of the first part of Ziegler’s Text-book of Pathological Anatomy, a work which has in the original German reached a second edition, while only a half or a third of the first edition has been published.

It may be of some interest to our readers to trace in a discursive manner the development of these subjects as exhibited in the principal manuals of Pathology and Pathological Anatomy, which have been issued in Germany during the last 40 years. The modifications in scope and style which these manuals have undergone exhibit in an interesting fashion the advance of this science during these years.

Taking first the subject of Pathological Anatomy, we find