

rheumatoid arthritis, slight and severe anaemias, chronic ulcerative endocarditis, and chronic nephritis of mixed type, etc.

Treatment of the mouth could do much to benefit a great variety of morbid states, but derangements in the lower alimentary tract imposed strict limits to the degree of improvement which could be effected in this way.

The rational treatment of chronic infective conditions of the digestive tract, such as streptococcal disease, was to attack the mouth infection vigorously by local measures, but at the same time to employ every possible therapeutic measure, whether diet, drugs, operation, massage, or vaccines, for the correction of the lesions in the stomach and intestines.

DISCUSSION.

Major H. P. PICKERILL said that as the result of experiments on animals he had found that the prolonged elimination of the glosso-pharyngeal reflex had had the following effects:

1. The animals died within six months.
2. Their weight equalled one-quarter to one-half that of the controls.
3. Starch and calcium were excreted in excess.
4. The salivary glands were undeveloped (in ratio to body weight).
5. The animals developed a polyneuritis, from which they apparently died.
6. *Post mortem* there were gastric lesions. Ulcers were constant, and there was dilatation and pyloric stenosis.

He had injected endotoxins and exotoxins from the human mouth into the jugular veins of rabbits, and found that endotoxins produced a rise of blood pressure and exotoxins a fall of blood pressure. He had administered daily by the mouth 1 c.cm. of broth culture from carious teeth to rabbits. This was followed by malaise, anorexia, and diminished defaecation, as was shown by human beings with oral sepsis and stasis. He thought the explanation was something as follows: The ingestion of non-acid or alkali substances was followed by glosso-pharyngeal depression, and this in turn by diminished alimentary secretion, oral and intestinal stasis, toxic absorption, and sympathetic nerve stimulation, intestinal dilatation, and viscous, scanty saliva. In this way a vicious circle was formed which could start at any point. Mr. DOUBLEDAY also took part in the discussion, and Dr. MUTCH replied.

BONE GRAFTING IN UNUNITED FRACTURES OF THE MANDIBLE.

At a meeting of the Clinical Section of the Royal Society of Medicine, held on May 10th, Surgeon-General H. D. ROLLESTON, the President, being in the chair, Mr. PERCIVAL P. COLE showed nine cases to illustrate the results of bone grafting in ununited fractures of the mandible. The cases included examples of free transplants from tibia and rib and several treated by the author's method of employing a pedicled graft derived from the lower jaw itself. The cases were inspected, and the results obtained were regarded as very satisfactory. Mr. Cole, in describing the operation devised and practised by him, said that a thick, well-nourished bone fragment could be detached from the basal margin of the body of the jaw. The blood supply of this fragment was maintained through a muscular pedicle consisting of platysma, deep cervical fascia, and the anterior belly of digastric. The longest fragment thus detached measured 4 cm. The great majority of ununited fractures exhibited a loss of bone that could be bridged easily by a graft of that length. Hence the operation had a wide range of applicability. Owing to the vitality of a graft of this nature results were obtained with more certainty and greater rapidity than by the use of a free bony transplant. Mr. Cole dissented from the view that free transplants failed so frequently that they should only be employed as a last resort. He had had no failure in cases where pedicled grafts had been employed, and was able to record 70 per cent. of successes in cases treated by free transplants.

At a recent meeting of the principal authorities and leading citizens of Naples a committee was formed for the establishment of a large children's hospital in that city. Professor Antonio Cardarelli, Senator of Italy, was elected honorary president.

Reviews.

TRANSFUSION OF BLOOD.

In an interesting historical note in BERNHEIM'S handbook on *Blood Transfusion*¹ the subject is divided into four periods: the first from 1492, when an attempt to save the life of Pope Innocent VIII was made, with the result that the three donors died, up to Carrel's work on the surgery of the blood vessels; the second period of direct transfusion rendered possible by Carrel's genius and developed by Crile's enthusiasm; the third period of indirect transfusion of whole blood by means of Lindemann's syringe and of the methodical determination of the haemolytic and agglutinative relations of the bloods of the donors and recipients; and, lastly, the recent epoch of indirect transfusion with the aid of anti-coagulants. In dealing with the control of haemorrhage the author states that rabbit and horse serum are generally of no value, dismisses calcium lactate as a doubtful prophylactic and of no use when bleeding has started, and points out that too much has been expected from saline solution, examples being given of its failure and of its inferiority to blood transfusion. In the section on the indications for transfusion the lines laid down by Libman and Otterberg are very closely followed, and reference is made to the suggestion that a systolic blood pressure of 70 mm. Hg is the danger limit which should call for immediate blood transfusion regardless of the other features of the case.

The chief dangers attending blood transfusion are haemolysis and agglutination, the former being by far the more serious; the precautionary tests to be carried out before transfusion so as to avoid these complications are detailed in the appendix, where Moss's classification of human beings into four groups according to their iso-agglutinins is reproduced. Though *a priori* embolism should be common, in practice it is very seldom seen. Examples coming under the author's notice of the transmission of syphilis and of malaria—accidents very rarely reported—are mentioned, and the results of a collective investigation into 800 cases of transfusion are quoted. The details of the method are well illustrated by figures, and the author humorously mentions that he thought he had invented a method which he however found had been actually described two and a half centuries earlier. The sodium citrate method of indirect transfusion, which it is thought will probably supersede the others, is discussed and compared with the results of transfusion of untreated whole blood; paradoxical as it seems, the coagulation time of the patient's blood is shortened, not prolonged, after the transfusion of citrated blood, but a febrile reaction with a rigor follows transfusion of citrated blood much more often than one of untreated whole blood. The various conditions, such as acute haemorrhage and shock, anaemia, haemorrhagic diseases, and leukaemia, for which transfusion is indicated, receive individual attention.

The author had to leave so suddenly for foreign service with the Johns Hopkins Base Hospital unit that he was unable to give his treatise a final revision, and this probably accounts for some delay in its appearance, but he may be heartily congratulated on his useful and practical contribution.

HOSPITAL SHIPS.

In the preface to his handbook on the *Fitting Out and Administration of a Naval Hospital Ship*,² Fleet Surgeon SUTTON, R.N., states that he is writing from an experience of three and a quarter years. The book contains four sections. In the first, allusion is made to hospital ships of the sailing ship era, and a summary is given of the stages by which the modern hospital ship has been evolved. The chief factors which have determined the direction of development in the past are traced, and a forecast made of the directions in which developments are likely to proceed in the future. There is a brief historical account of the

¹ *Blood Transfusion, Haemorrhage, and the Anaemias.* By Bertram M. Bernheim, A.B., M.D., F.A.C.G., Instructor in Clinical Surgery, the Johns Hopkins University. Philadelphia and London: J. B. Lippincott Company. (Pp. 259; 18 figures. 18s.)

² *The Fitting Out and Administration of a Naval Hospital Ship.* By Edward Sutton, Fleet Surgeon R.N., S.M.O. R.N. Hospital Ship *Plassy*, etc. Bristol: John Wright and Sons; London: Simpkin, Marshall and Co.; Toronto: The Macmillan Co. of Canada. 1918. (Demy 8vo, pp. 110; 28 figures.)

origin of the Red Cross organization, and the rules by which the employment of hospital ships ought to be governed are given *in-extenso*. The uses to which hospital ships may be put in war are stated and possible irregularities discussed, as also the question of confiscation.

The principles which should guide the selection of a mercantile marine vessel for conversion into a hospital ship are discussed under two headings: the choice of a suitable vessel, and the location of specific hospital requirements. To write a useful description of the converted hospital ship is far from easy, but the author's scheme is good. He first devotes a chapter to the steamship *Drina* prior to conversion, and in the succeeding chapter describes the same vessel after conversion. This will be a valuable guide to any one who may have to carry out such a conversion. Every measurement likely to be wanted in the construction of the wards and different special departments—the operating theatres, store rooms, etc.—with all their fittings, seems to be given.

The next section deals entirely with the working organization of a hospital ship. The method of embarking patients is described under four headings: (1) Means of getting the patient (a cot case) inboard; (2) allocation of his bed; (3) registering the occupation of that bed; and (4) stowage of the man's effects. A new and admirable modification of the "service" cot carrier is described; the innovation is that both ends are detachable, and there are wooden rollers on its floor; photographs and a drawing to scale are given. The organization for evacuation is simple and original. By means of a system of labels and discs, which is described in detail, the considerable amount of clerical work necessary for papers which must be sent with patients can be quickly compiled. In any service institution the stores department is very important, and here a novel system is described whereby the fluctuation in the stock of each article is automatically recorded; the same scheme also enables the person responsible for ordering the fresh stores to see at a glance how much of each article is required.

The author has had experience of three separate hospital ships, and this alone entitles him to speak with authority on his subject. His book contains a great deal that is new, and he has displayed considerable genius in evolving a remarkable organization for the working of a hospital ship. The value of the book is enhanced by helpful diagrams and illustrations. It will meet a real want, for we are unaware of any similar publication; we congratulate the author, and confidently recommend his work to the notice of all medical officers—naval or military—who are in any way concerned with hospital ships.

THE GROWTH OF MEDICINE.

THE study of the history of medicine has received a great stimulus in this country by the establishment of a separate section of the Royal Society of Medicine, and there has been a remarkable growth of interest in the subject in America. Recent evidence of this is afforded by a large work compiled by Dr. ALBERT H. BUCK, of the Columbia University, New York, dealing with *The Growth of Medicine*³ from the earliest times to about 1800. The volume, finely printed and illustrated, is the first of a series to be published at the Yale University Press on the foundation established in 1916 as a memorial to three generations of a family of doctors educated at Yale, the Williams Memorial Publication Fund.

Dr. Buck has succeeded in weaving a valuable account from the many sources of information open to him. His history carries the reader through each period of medical progress or recession with equal interest. From its origin in the East when anatomy was unknown and treatment for most part mystic and in the hands of the priesthood, he traces the dawn of clinical observation and illustration in Greece, and incidentally refers to the practice of offering votive tablets to Aesculapius, some of which have been found to portray the morbid conditions of the petitioner. A most admirable model of a face distorted by paralysis, discovered some years ago and now in a German collection, is given as an illustration. With the era of Hippocrates a

great stride forward was made, and all readers of his aphorisms must recognize that many of the rules of conduct laid down for physicians are as applicable at the present day as they were in 400 B.C.

Athens in time gave place to Alexandria as a seat of learning and a great clinical teacher arose in the person of Herophilus; many of the subjects discussed under his auspices have remained undecided to the present day. The varying experience of a vast number of writers has tended to prevent any common agreement. Specialism began to be practised just before the beginning of the Christian era, and once again the chief seat of learning migrated and settled itself in Rome. The most prominent figure of that period was Asclepiades, whose teaching, entirely founded on observation and without means of verification by *post-mortem* examination, contained much that survived through succeeding centuries. In the second century the advent of Galen exercised a great influence upon medical thought and practice. His voluminous writings, which have been so often translated, have been perhaps more highly appreciated by later generations than by the readers and pupils of his own day. Like many other pioneers, he was far in advance of his period, and obviously had that strong belief in himself which has proved essential to great teachers in all times.

To follow Dr. Buck through each successive wave of advancement and recession, to Constantinople, to Persia, and to the final settlement in Northern Italy and Western Europe generally, would call for more space than is available. It must suffice to record that every step forward, or backward, is traced with the same thoroughness, apt quotations being inserted and well-executed illustrations being supplied of many of the epoch-making events, or of the great leaders in many lands. Some medical historical treasures will probably have been destroyed in the library of Louvain, and notably a finely illuminated edition of Vesalius's works, but its fate is at present unknown. Medical literature has suffered much from the incendiary zeal of invaders at many previous periods of history, but although originals have been lost, the copies laboriously executed by monastic and other hands have remained, and Dr. Buck has done a great service in so classifying and bringing together the scattered records as to form a most interesting and valuable history.

NOTES ON BOOKS.

THE Central Council for District Nursing in London has issued a *Directory of District Nursing*⁴ in London which will undoubtedly be of service to social workers, medical practitioners, and others engaged in the health service of the metropolis. The directory gives the name of practically every street in the administrative county, together with the borough and Poor Law union in which it is situated. For each entry there is a reference number to the index of district nursing associations.

Mr. HAMILTON WHITEFORD has brought together in a small book some practical notes on the diagnosis and treatment of *Acute Appendicitis*,⁵ based on his own experience. After dealing with points in the diagnosis, he passes on to discuss questions of treatment, dealing with them under the heads of general principles—pre-operative, operative, and post-operative. This is followed by a note on some post-operative complications. The author is inclined to be didactic on matters which have been much debated in recent years. His general conclusion is that in advanced cases the operator's temptation is to do too much.

⁴ *Directory of District Nursing and Streets List for London*. London: The Botolph Printing Works, 8, Gate Street, Kingsway, W.C.2. (2s. 6d.)

⁵ *Acute Appendicitis: Practical Points from a Twenty-five Years' Experience*. By C. Hamilton Whiteford, M.B. C.S., L.R.C.P. London: Harrison and Sons. 1917. (Cr. 8vo, pp. 72. 4s. net.)

THE review which is the organ of the Russian Association for the protection of mothers and infants entered on its third year of life at the beginning of 1918. It is published at Petrograd (Nicolaiievskaja, 49) in two-monthly fasciculi, which form at the end of the year a goodly volume of six hundred pages. The editor is Dr. P. Medowikoff.

³ *The Growth of Medicine from the Earliest Times to about 1800*. By Albert H. Buck, B.A., M.D., Columbia University, New York. Newhaven: Yale University Press; London: Humphrey Milford; Oxford: University Press. 1917. (Med. 8vo, pp. 582. 21s.)