BOOK REVIEWS

ILLUSTRATED HANDBOOK IN LOCAL ANAESTHESIA. Edited by EJNAR ERIKSSON. Chicago: Year Book Medical Publishers. 1969. $14.25.

THIS is a multi-author book published originally in the Swedish language. The English translation has been provided by Dr. Victor Goldman and Dr. Graham McCarthy and is excellent.

Of the criteria by which one judges usefulness of a book dealing with regional anaesthesia, certainly the clarity of description of technical procedures and the adequacy and appropriateness of the illustrations are the most important. Judged by these criteria, this volume is outstanding. The sections dealing with the pharmacology of local anaesthetics, and with complications and their treatment, are perhaps rather too brief. However, this is not an important defect in the volume, and it is recommended as the most useful monograph on the subject which has come to our attention.

R.A.G.

PHYSIOLOGY OF SPINAL ANESTHESIA. By NICHOLAS M. GREENE, M.D. Baltimore: Williams and Wilkins; Toronto: Burns and MacEachern, 2nd ed. 1969. $10.75.

ELEVEN YEARS have elapsed since the publication of the first edition of Dr. Greene's excellent monograph on the physiological effects of spinal anaesthesia. During that time the volume has become one of the classics in the anaesthesia literature. The second edition has brought the subject up to date, and includes much new information which should ensure a warm welcome from the specialty.

R.A.G.

DRUGS IN ANAESTHETIC PRACTICE. By F. G. WOOD-SMITH, H. C. STEWART, AND M. D. VICKERS. London and Toronto: Butterworths. 3rd ed. 1968. $16.50.

THIS VOLUME provides a useful quick reference for the anaesthetist. It describes briefly, but adequately, the action of most of the drugs which the anaesthetist is likely to use, or to encounter as concurrent medication in his patient. The improvement since the first edition is remarkable, and the volume is highly recommended.

R.A.G.

PLASMA SUBSTITUTES ON A GELATIN BASIS (PLASMAERSATZPRAPARATE AUF GELATINEBASIS). Symposium in Hamburg, January 12, 1968. Edited by KARL HORATZ. Stuttgart: Georg Thieme Verlag. 1968. Pp. 89.

THIS LITTLE VOLUME contains seven papers discussing the chemical and biochemical properties of gelatin preparations, their place in clinical practice, the retention,

distribution and excretion of plasma expanders, their influence on renal function, their effects on the microcirculation in experimental shock and on blood coagulation, and morphological investigations of their long-term toxicity. The authors of the various papers present a good deal of their original work; the presentations are supported by good illustrations and graphs. The book concludes with a verbatim transcript of a panel discussion on the use of gelatin preparations.

In contrast to Europe, the interest in plasma expanders appears rather limited in Canada, particularly among anaesthetists; perhaps this field should receive more of our attention.

W.E.S.

BIOCHEMISTRY OF OXYGEN (BIOCHEMIE DES SAUERSTOFFS). By B. HESS and HJ. STAUDINGER. Berlin: Heidelberg; New York: Springer Verlag. 1968. Pp. 360.

THIS POCKET BOOK SIZE VOLUME contains papers presented at the nineteenth colloquium of the German Society for Biological Chemistry. In spite of the German title the majority of the text is in English, dealing with such topics as the physical and theoretical chemistry of oxygen, the structure of oxygenated and deoxygenated myoglobin, intercapillary oxygen transport, the design of the respiratory chain, oxygenases, the activation of oxygen in models, photosynthesis, and the synthesis of respiratory enzymes. This is a book for the biochemist and research worker; the practicing anaesthetist is bewildered by the technical data, and the aspiring resident may be relieved that all of this is not required examination material. Yet even a glimpse into the depth of the biochemistry of oxygen will teach us to set the oxygen flow at the gas machine with more thought and respect.

W.E.S.

ANAESTHESIOLOGY AND RESUSCITATION. Berlin, Heidelberg, New York: Springer Verlag.

Volume 22: H. L'ALLEMAND. Respiratory Insufficiency (Ateminsuffizienz). Pp. 90. U.S. $5.50.

Volume 24: J. WAWERSIK. Ventilation and Respiratory Mechanics under Anaesthetic Conditions in Infants and Small Children. (Ventilation und Atemmechanik bei Säuglingen und Kleinkindern unter Narkosebedingungen). Pp. 151. U.S. $8.00.

Volume 27: CH. LEHMANN. Long Term Ventilation (Langzeitbeatmung). Pp. 91. U.S. $6.00.

Volume 28: H. NOLTE. Respiratory Resuscitation (Die Wiederbelebung der Atmung). Pp. 89. U.S. $2.00.

Volume 29: U. HENNEBERG. Control of Ventilation during Anaesthesia for Newborn and Infants (Kontrolle der Ventilation in der Neugeborenen- und Säuglingsanaesthesie). Pp. 73. U.S. $4.95.

Volume 38: H. BENZER. Ventilation with Respirators and Pulmonary Surface Tension (Respiratorbeatmung und Oberflächenspannung in der Lunge). Pp. 51. U.S. $4.00.

THESE SIX VOLUMES of the series Anaesthesiology and Resuscitation published by Springer in Germany deal with pulmonary ventilation and are therefore reviewed together.

The monograph by L'Allemand (volume 22) on respiratory insufficiency reviews the author's own research and clinical experience in this field. The causes and pathophysiology of respiratory insufficiency and its clinical picture are briefly discussed. The major part is devoted to treatment and divided into prophylactic measures (e.g., bronchial toilet, physiotherapy, and antibiotics) and supportive measures and active care encompassing tracheostomy and ventilation with the Engstrom respirator. Of interest is the author's experience with thyroid suppression (20 to 40 mg/kg potassium iodide per day up to six days) in the treatment of patients with hyperthermia. With this regime normothermia could be obtained easier and maintained better by the application of surface cooling.

Volume 27 is the report of a symposium on "Long Term Ventilation" held in 1966 in Munich. Long term ventilation is defined as respirator dependence over twenty-four hours. Individual papers on the pathophysiology on artificial ventilation, patient monitoring, indications for the institution of respirator care, and a detailed comparison of various respirators (with the conclusion that the ideal respirator has not yet been found and that there are good indications for the use of pressure and volume controlled machines), are followed by a panel discussion on the various problems arising with prolonged pulmonary ventilation (panel discussions lose most of their impact and flavour when printed).

The monographs by Wawersik (volume 24) and Henneberg (volume 29) deal with ventilation and respiratory mechanics in the newborn and infant. The former represents a more theoretical examination of the problem, while the latter is more clinically oriented; both are complementary to some extent.

Nolte's monograph (volume 28) on respiratory resuscitation presents a well conducted study of the teachability and the results obtained on a comparison between rescue breathing and the three best known manual methods. If another blow were needed to destroy the reputation of manual methods of artificial respiration, this monograph would suffice. The author's evaluation of how well these methods can be taught is of interest; not only was the time required to teach the manual techniques to 25 laymen three times greater than that needed to teach rescue breathing, but the latter technique was also better retained. Five months after the training course, 93 per cent of the trainees could achieve satisfactory ventilation with rescue breathing, while only 20 per cent could perform the manual techniques well. The author's study fully justifies his conclusion that the teaching of the manual methods should be abandoned.

The effect of mechanical respiration on alveolar surface tension was studied by Benzer (volume 38) in rabbits. In dead animals the surface tension is disturbed quickly by mechanical ventilation, while the changes are significantly less in living animals, an indication for the need for continuous replacement of the surface active material. In the author's opinion, compression of the alveolar lining layer causes extrusion of surface active molecules and leads to a loss of surface tension. An effect of mechanical ventilation on the alveolar surface properties could be completely prevented if the end-expiratory pressure was 5 cm H_2O during ventilation. The author advocates the use of a slightly elevated end-expiratory pressure during prolonged thoracic operations and, in general, advises caution in the use of a negative phase during expiration. The advocates of large tidal volumes and of a persistent positive expiratory phase will find further evidence for their cause in this monograph.

Each of the volumes has an extensive bibliography; printing and illustrations are of high quality; English abstracts are adequate to convey the main ideas of each volume.

W.E.S.