

Reviews

BLOOD TRANSFUSION

The Blood Bank and the Technique and Therapeutics of Transfusions. By Robert A. Kilduffe, M.D., and Michael DeBakey, M.D. (Pp. 557. 37s. 6d.) London: Henry Kimpton. 1942.

A book reviewing the recent work on blood transfusion has been greatly needed. So much has been added to our knowledge of the subject in the last two years that it has been difficult even for the specialist to keep pace with the literature. Dr. R. A. Kilduffe and Prof. DeBakey attempt in their monograph to cover the past history of blood transfusion and its modern developments. They present, indeed, a most comprehensive review of the whole subject, supplying in addition complete bibliographies attached to each chapter and 214 well-produced diagrams and illustrations. There are chapters dealing with rational indications and contraindications for transfusion: a sound description of the technique of blood typing and compatibility tests, a discussion of the changes occurring in stored blood, the operation of a blood bank, the value of plasma transfusion, and the methods of plasma transfusion. Serum, as is customary in America, receives scant attention. The technique of transfusion and possible complications are also fully discussed. It is unfortunate that the fundamental work of Mollison and Young on the survival rate of stored erythrocytes is not appreciated. These observers have shown that corpuscles stored for 18 days survive in the circulation as long as fresh cells. It is therefore misleading to state that erythrocytes stored for longer than 7 days are relatively inefficacious.

In spite of its admirable qualities, the book will inevitably leave the English reader who worked through Dunkirk and the air raids on Britain with a sense of unreality if not of irritation. Shock, as seen in air-raid casualties, does not fit the classical theories. Treatment cannot be applied by theoretical rule. We cannot say of a man with multiple injuries that he has lost so much blood and therefore he must receive a corresponding amount in a definite period of time all calculated upon a fine formula. Few practical workers would, for instance, agree that one pint of plasma quickly transfused will suffice for the ordinary case of wound shock. The same criticism is applicable to the description of methods of preparation of serum and plasma. It all sounds so easy if you follow the rules. Experience in England with mass production of these blood derivatives has shown that, though excellent results are obtained, there are innumerable difficulties to be surmounted. Transfusion therapy in America was still in its peacetime armchair when this monograph was written.

PSYCHO-ANALYSIS RE-EXAMINED

Psychoanalytical Method and the Doctrine of Freud. By Roland Dalbiez. With an introduction by E. S. Strauss, M.D., F.R.C.P. Vol. I: Exposition. Vol. II: Discussion. Translated from the French by T. F. Lindsay. (Vol. I, pp. 415; Vol. II, pp. 331. Two volumes 40s.) London, New York, Toronto: Longmans, Green and Co.

This work in two volumes consists of a systematic re-examination of Freud's work in the light of pure philosophy and logic. The writer stresses that Freud made no claim to be a philosopher and was even at pains to show how little use he had for the breed. Nevertheless the first volume, which contains a painstaking recapitulation of Freud's views, finds little difficulty in reconciling Freud's formulations of his clinical material with philosophical tenets. The chief comment on Freudian psychological theories appears in the first volume in the author's views on Freud's "Dream Psycho-analysis." Dalbiez maintains that the theory of dreams, which is the corner-stone of Freud's work, is a theory of non-cognitive but constructive mental activity. The dream-thoughts are characterized by the absence of reality; they follow one another associatively—that is to say, in a way not exhibiting causal sequence as happens in thinking which is related to the external world. For the understanding of this type of event Freud's method is admirable and his work "the most profound analysis that humanity has known"; but for the understanding of other realms of being, "the artistic aspects of art, the scientific aspects of science," and the like—in other words, the realms where thought is related to an object—Freudian method and Freudian psychology are considered to

be of little use. "Psycho-analysis leaves the problems of the human soul where it found them."

The author conscientiously tackles the logical difficulties in Freudian method. For example, being troubled by the criteria of validity in the interpretation of ideas in a dream, he poses five criteria: "evocation," "similarity," "frequency," "convergence" of a variety of indications, and "verification" by a third party. The last must as a rule be impossible to apply, but the point at issue—namely, the validity of Freud's method of dream interpretation—seems on the whole to be conceded. He discusses also the Pavlovian experiments so far as they seem to have any relevance to Freudian theory, and considers that the Freudian and the Pavlovian formulations of the dynamics of the psychoneuroses can be made to harmonize.

The translation has been made into very readable English, and the book is well documented with case-histories personally observed by the author. For those who are philosophers it must be satisfactory to know that a critical re-examination of this sort from the standpoint of philosophy has been made, while those who are not will be glad to learn that philosophy finds little to quarrel with in psycho-analytic method as distinct from psycho-analytic "metapsychology."

DESIGN AND PURPOSE

Design and Purpose. By Frederic Wood Jones, D.Sc., F.R.S., F.R.C.S., Professor of Anatomy, University of Manchester. (Pp. 84. 5s.) London: Kegan Paul, Trench, Trubner and Co. Ltd. 19 2.

It would be a gain for the outlook of humanity if, in the readjustment of thought which is occurring, a general belief in the purpose of human life could be restored once more. This is Prof. Wood Jones's aim in his Purser Lecture, *Design and Purpose*. Those who enjoyed his *Life and Living* will not be disappointed in this later essay. He considers that when primitive animism proceeded through polytheism to monotheism, the idea that man was created in God's image separated him in thought from the rest of creation, which he regarded as merely created for him. For centuries this shrunken conception sufficed his intellectual needs and satisfied his curiosity. Darwin opened a new vista for all who were prepared to see a great wholeness in the ordering of things, but for some reason, which at this distance seems beyond understanding, his thesis led not to spiritual advancement but to intellectual pessimism. Yet even the term "struggle for existence" was not of his coining, and he used the phrase "survival of the fittest" in a large and metaphysical sense, including the dependence of one being on another. It was left to others to misapply them in justification of war and destruction. Such revolts as have been made against the pessimistic outlook have usually been sentimental, metaphysical, or theological; of late, however, a need for a new synthesis has been expressed by workers in many scientific fields.

The author then discusses the astonishing identity in basal structure underlying all matter from the atom to the universe, maintaining that there is uniformity of plan and apparent design manifest throughout. The moment we see life we see purpose, though he does not presume to inquire into the nature of that purpose. What he does see is that all things, animate and inanimate, are travellers along a road of purpose on which all wayfarers have equal rights. The end of the road we do not know, but here is a bracing tonic to help us on the journey.

Notes on Books

The fifth edition of Dr. E. B. JAMIESON'S *Companion to Manuals of Practical Anatomy* has appeared, with some rearrangement of the order in which the systems are presented (Oxford University Press, 15s.). These changes are stated to have been introduced with the object of bringing the book into more complete harmony with certain of the manuals which it is intended to supplement. It thus appears in the form of an auxiliary in the way of summarizing the more complete and full descriptions in certain of the larger volumes on the subject. The author has undoubtedly succeeded in bringing most of the important facts which a medical student preparing for an examination in anatomy should know within the compass of a small book of just over 700 pages. It is not the type of book, however, which would be most useful to a junior student before he has acquired a clear mental picture or visual knowledge of the main facts of anatomy and embryology, since it is not

illustrated, and it is with few exceptions purely descriptive, the functional meaning or practical application of the various objects which are described not being sufficiently emphasized and in many cases not even mentioned. The book may be regarded as an admirable synopsis of the general facts of human anatomy and embryology and of value to senior students who are preparing for an examination on these subjects and have only a limited time for revision. Employed in this way it may be confidently recommended as a reliable help to the difficult task of marshalling the numerous details of these subjects within a given time.

To most of us the name of *Count Cagliostro* bears a somewhat vague connotation as that of a swindling charlatan of the second half of the eighteenth century, contemporary of, and as it were half-way between, Mesmer and Casanova; and that is, in brief, a summary of the career of this Sicilian adventurer, whose real name was Giuseppe Balsamo. Mr. MICHAEL HARRISON has expanded this to a full-size biography (Rich and Cowan, 18s.), much of which, as he admits, is based upon surmise rather than reliable records. He is interested much more in the man's swindles and confidence trickery than in his quack doctoring; and a distinctly turgid style with a tendency to irrelevance further detracts from the strictly medical interest of the memoir. A point of some slight interest is the undoubted resemblance between the portrait of Cagliostro which is reproduced as a frontispiece and the well-known likeness of another contemporary, John Hunter.

Preparations and Appliances

PRESERVATION OF FUNCTION IN THE BURNT HAND

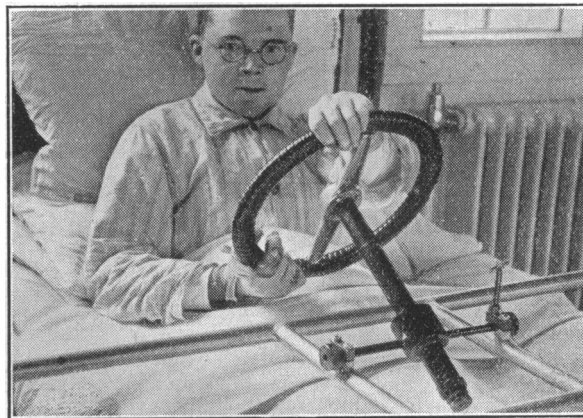
Wing Commander J. C. AINSWORTH-DAVIS, M.D., F.R.C.S., medical officer in charge of the surgical division of an R.A.F. general hospital incorporating a burns centre, writes:

The optimum position of the arm and hand following aircraft burns has been concisely laid down by Mr. A. H. McIndoe, consultant in plastic surgery to the Royal Air Force, as: (1) elevation of the whole arm; (2) 30 degrees extension at the wrist-joint; (3) flexion at the metacarpo-phalangeal joints varying in degree from slight at the second to marked at the fifth; (4) mid-flexion at all interphalangeal joints; (5) adduction of the extended thumb so that the tip of the thumb and the index finger are almost in contact. Failure to maintain this functional "position of grasp," together with adequate movement of all the joints, can result in the condition of frozen claw-hand, characterized by hyperextension of the fingers at the metacarpo-phalangeal joints with acute flexion at the interphalangeal joints. Once this deformity has been acquired it is a matter of extreme difficulty, if not of impossibility, to establish normal movements in the later stages of healing.

Except where tendons are badly exposed or joints are opened as the result of burning, movements can be carried out from the very beginning, particularly when the saline-bath treatment is used or, in cases with concomitant injuries such as a fractured femur, that of the Bunyan-Stallard envelope. By either method movements are painless and the danger of "freezing" is removed. While the hand and fingers are raw these movements should not be excessive, but be limited to what can be voluntarily accomplished in the bath or bag twice or three times a day. As healing progresses, however, the frequency and scope of movement are increased, and a series of regulated and active exercises is begun. For this purpose many devices have been suggested from malleable metal splints, for position, to the grasping of a small rubber ball for movements. The more the patient's co-operation and interest can be obtained the quicker and better will be the ultimate result; and with this object in view there has been constructed in our workshops the following apparatus, which combines functionally correct movements and position and a certain novelty that the patient appears to enjoy. The idea was suggested to me while driving my car and observing my hands, which, if only the steering-wheel had been thicker, would automatically have assumed the optimum position already described.

The apparatus consists of a portable metal frame which will fit over a bed and which carries a thick motor-car steering wheel, adjustable as regards resistance to movement and the angle of the steering column. A varying angle is of importance, so that the wheel can be adapted to a patient lying down during the early treatment of his burnt hand or sitting up in the later stages. Adjustment is made by tightening the two knurled nuts screwed

on the end of the two shafts which carry the housing. Further locking can be effected by tightening the nuts of the bearings which carry the whole apparatus, for which a box spanner is provided. The degree of resistance can be varied, according to the stage of convalescence of the patient, by an adjustable knurled nut at the base of the steering column. After necessary adjustment has been made, an additional knurled locking nut is provided to prevent the adjusting nut from tightening or easing off. Locking is effected by gripping the adjusting nut and screwing the locking nut up to the face of the former as tightly as possible.



A recording apparatus, not shown in the figure, is provided in order to keep an accurate account of the number of revolutions completed in each direction.

The accompanying photograph illustrates an airman convalescing from severe third-degree burns of both hands, and indicates the movements which must be carried out in order to produce a full functional result. Treatments are prescribed three times a day, the number of revolutions in both directions and the degree of resistance being governed by the general condition of the patient and the stage of healing of his burns.

My thanks are due to Air Marshal Sir Harold E. Whittingham, Director-General of the R.A.F. Medical Services, for permission to publish this note; to Mr. A. H. McIndoe for his approval of the idea and his constant encouragement; to Wing Commander Harrison for permission to construct the apparatus in his workshops; and to Sergeant Ince for its manufacture.

SULPHADIAZINE

Charles F. Thackray Ltd. inform us that sulphadiazine (Lederle) is now available in this country. We have made several editorial references to this new sulphonamide compound (see particularly *B.M.J.*, Jan. 17, 1942, p. 76). It has a full range of therapeutic activity, and extensive studies in the U.S.A. have shown particularly that it is fully effective in pneumonia. Considerably higher blood concentrations are attained with a given dosage than with other sulphonamides, and the degree of acetylation is small. Perhaps its most important advantage is low toxicity: according to existing information, cyanosis is never produced, and nausea and vomiting are rare.

The availability of sulphaguanidine (Lederle) is also announced. This is a compound much of which is not absorbed, and it is therefore used only for its effect in the bowel. The principal indications are bacillary dysentery (see *B.M.J.*, Oct. 11, 1941, p. 514) and prophylaxis before operations on the colon.

NEW VITAMIN K PREPARATION

Roche Products Ltd. have introduced a new synthetic water-soluble vitamin K preparation. "Synkavit" (the tetra-sodium salt of 2-methyl-1:4-naphtho-hydroquinone diphosphate) is available in 10-mg. tablets for oral administration, or in ampoules (10 mg./c.cm.) for intramuscular or intravenous injection. Its use is suggested in conditions in which the prothrombin level has been lowered by failure to absorb vitamin K, as in haemorrhage after obstructive jaundice, and in neonatal haemorrhage. An injection of 10 mg. daily should bring the prothrombin level back to normal within a few days. The manufacturers claim that oral administration is effective without the use of bile salts, which suggests its use orally in obstructive jaundice, though clinical trials under such conditions have not been very extensive. Since the causes of haemorrhage are numerous, the use of synkavit should be guided by the prothrombin level until some simpler means of estimating vitamin K deficiency is found.