The text is very full and gives a short account of most of the diseases which are referred to: it does not keep too rigidly to the manifestations shown in the hand but wisely mentions some of the changes elsewhere when these are important, even including a photograph of other parts such as faces or feet when these are affected. In myxoedema, for example, where the face gives so much more diagnostic help than the hands, a photograph of the face is included in the illustration. (The particular patient shown here, before and after treatment, unfortunately seems to have been a prize-fighter and the damage to the features by their battering covers most of the improvement.)

It is hard to draw the line between conditions which are clearly suitable for a book about the hand and those that are not. If anything, the author has included too many conditions rather than too few. For example, in Paget's disease or in hypoglycaemia, examination of the hand is unlikely to help anyone much, yet these are included in the book. For this reason the book is more of an atlas for experienced clinical travellers than a Baedeker's guide for clinical tourists; the inexperienced clinical tourist might be confused if he attached equal importance to examination of the hand in all the conditions he would find in this book. However, the book is a truly magnificent atlas, and represents the fruits of many years travelling, collecting and classifying in the world of clinical medicine. It is likely to become a classic, and in successive editions to reach nearer and nearer to the completeness and perfection it has already so closely approached.—Richard ASHER.

The Chemistry of Trauma. By Jonathan E. RHOADS, M.D., John Rhea Barton Professor of Surgery, Surgeon-in-Chief, University of Pennsylvania Hospital; and John M. HOWARD, M.D., Professor of Surgery, Hahnemann Medical College. With a chapter by Peter J. JANNETTA, M.D. 9½ × 6½ in. Pp.xii + 191, with 51 figures and several tables. Index. 1963. Springfield, Illinois: Charles C. Thomas, Publisher. Price \$7.50.

Knowledge of the biochemical and physiological responses to injury has increased greatly during the last thirty years and the time is ripe for an author to collect the data scattered in journals all over the world and attempt the requisite syntheses. This small book is welcome although it only partly does what is needed. It is divided into two parts, that related to burns by Dr Rhoads, and that to trauma by Dr Howard. Both are concerned with the systemic biochemical responses; there is reasonable integration between the sections although some repetition was inevitable. The section on burns deals with the water content of the blood, with sodium and potassium ions, serum proteins, red cells, problems of nutrition, especially the negative-nitrogen-balance, and in a rather telegraphic fashion with other topics like body fat, adrenalin, renal function and gastric secretion. Important omissions include the local biochemical and biophysical changes in heated skin, the biochemistry and possible chemical mediation of the local inflammation of burns and the current controversy concerning the release of skin antigens as a cause of "toxaemia." Dr Howard opens with the wound and is concerned with mucopolysaccharides, collagen and ascorbic acid; but he cannot deal adequately with the subject in a few pages, and the metabolism of nucleic acid is not mentioned. Then follow chapters on adreno-cortical function (where it is good to see denials of adreno-cortical failure and of the use of steroids in therapy), fluid and electrolyte shifts, carbohydrate metabolism, protein metabolism, lipids, the response of the kidney, gastro-intestinal tract and liver to injury, and a final small chapter on the thyroid. The chapter on lipids is welcome although the subject suffers from a lack of systematic study, but curiously the work on haemorrhagic lipaemia and lipolysis is omitted and there is no mention of the lipid-clearing effect of heparin release. Renal failure is correctly divided into oliguric and non-oliguric forms but their relevance to treatment and pathogenesis is not mentioned. It is a pity to see the error perpetuated that the kidney cannot conserve sodium. The chapter on carbohydrate metabolism integrates well the Cori and Krebs cycles and due importance is given to energy-rich phosphate bonds, but the curious paradox between hyperglycaemia and relative inability to metabolise carbohydrate is not discussed. Protein and nitrogen loss is dealt with without mentioning sulphur, phosphorus, potassium or key amino-acids. Other omissions include the effects of regional injury (such as hypernatraemia after head injury, oxygen and carbon dioxide exchange after chest injury), post-traumatic hepatic jaundice, changes in coagulation and fibrinolytic mechanisms and the pituitary gland. Prominence is given to work done during the Korean War. Most of the other references are transatlantic, but important work done in various British and other European centres is hardly mentioned. The list of references will be useful to the specialist reader and there is an adequate index. Neither the authors nor the editor tell us for whom this book is written. I fear that it has fallen between two stools and that it will satisfy neither the research worker nor the surgeon.—S. SEVITT.