people must be given equal opportunities to those of the sighted, and it is contended that this has now been achieved in the United States of America. In about 1830 three private schools for the blind were opened in the United States, and in general these followed the pattern of those already working in Europe. The first director of the Perkins Institution in Boston was Samuel Gridley Howe who did much to integrate the blind into the life of the general population. He was responsible a few years later for the opening of the first state school for the blind in Columbus, Ohio. Craft training was very important in these early blind schools, and has continued to be an essential part of blind training. Some blind people lived and worked in blind institutions and finished their lives in homes for the aged blind. As time passed the blind were encouraged to live and work independently and not only by handicrafts. The importance of a family life for the blind is now receiving great attention.

A. G. CROSS

Diagnostic Ultrasonics: Principles and Uses of Instruments. By W. N. MCDICKEN. 1976. Pp. 320, figs, tables, refs. Granada Publishing, St Albans (£15)

Although Dr McDicken is a hospital physicist he is accustomed to teaching doctors and radiographers and his book is designed to meet the needs of a similar readership. Two radiologists taking up ultrasonic work vouch for the suitability of the book for beginners.

Only a small proportion of the book is relevant to ophthalmology and the eight entries in the index under eye refer to very superficial accounts, apart from a paragraph on transducers in eye work.

With the increasing acceptance of ultrasonic diagnosis a book of this type is very suitable for hospital libraries and ophthalmologists should support its purchase. For their own use, however, their money would be better spent on one of the books on ultrasonography in ophthalmology.

DOUGLAS GORDON

Essentials of Clinical Neuro-Ophthalmology. By A. H. WOLINTZ. 1976. Pp. 198, figs, tables, refs. Little Brown, Boston (\$12.50)

The aim of this book is to introduce the commoner neuro-ophthalmological problems to ophthalmologists, neurologists, and neurosurgeons who are beginning their specialty training; as such it succeeds admirably. Any book of this type is bound to be incomplete in detail although the author overcomes this by the liberal use of lists, some of the contents of which may not be included in the text. The bias of several sections is unduly weighted by this incompleteness—for example, chiasmal lesion is the only cause for changes in refraction mentioned.

The layout of the book is good but the construction of each chapter and section is often not completely clear mainly because of the large amount of information that the author succeeds in including. The few diagrams are clear, and there is a carefully selected bibliography for those whose enthusiasm has been excited by this useful and concise book.

DAVID TAYLOR

Handbook of Perception, vol. V, Seeing. Edited by E. C. CARTERETTE and M. P. FRIEDMAN. 1975. Pp. 527, figs, tables, refs. Academic Press, London and New York (\$28.50)

This book on visual perception is part of a multi-volume treatise concerning human perception. It is written mainly for psychologists and perhaps natural scientists in general. Contributions to ophthalmology appear to be negligible. Altogether 11 authors have contributed 12 chapters on subjects ranging from the history and contemporary theoretical problems of research into seeing to painting and photography, sandwiching the measurement of visual stimulus, the neural basis of seeing, temporal and spatial resolution, and the perception of pattern, colour, space, and motion.

The arrangement and the choice of the chapters throughout the book is somewhat arbitrary and there is no synchronized theme running through the different chapters dealing with similar and related subjects. For example, the chapter by J. G. Robson dealing with the receptive fields of cells in the visual nervous system consists of a somewhat dogmatic review of the literature and the visual system is viewed as a spatial frequency analyser with modest capabilities. This is completely divorced from the chapter by J. P. Thomas dealing with the psychophysics of spatial resolution in human subjects with attempts to interpret this in terms of the receptive field organization of cells in the nervous system. Similarly, the chapter by R. L. and K. K. De Valois provides a comprehensive review of studies on the behaviour of colour-coded cells in the visual system and its relationship to the psychophysics of colour vision, but is completely divorced from the chapter by R. M. Boynton which deals with the physical, psychological, and physiological basis of colour, hues, and wavelengths.

The chapters dealing with temporal factors by L. Ganz, spatial factors by J. Thomas, three-dimensional depth and space factors in seeing by W. Richards, and also somewhat abstruse phenomena of pattern and object perception such as 'perceptual constancies' and 'illusions' by P. C. Dodwell take a basically bioengineering approach to these subjects.

The chapter on the measurement of the visual stimulus by Y. Le Grand includes much theoretical detail of the physics of light and radiometric concepts but fails to give more practical information about different types of visual stimuli and the methods of measurement required in research on seeing.

The chapter by P. C. Dodwell on contemporary theoretical problems comes to terms with the fact that there is still a wide gap between our understanding of perception and our ever increasing knowledge about the neurophysiology of the visual system. This view is shared by the authors of some of the other chapters. However, the present impetus to research on seeing appears to be coming from recent neurophysiological studies of the nervous system as is evident from the fact that practically all the chapters attempt to correlate perceptual phenomena with recent neurophysiological data. An excellent example is the chapter by R. Sekular on visual motion perception which emphasizes the recent neurophysiological evidence on the parallel processing of spatial details and temporal factors by