

### Book Reviews

other hand the doctrine of the transfer of qualities during combustion and respiration led Galen to an answer which appeared quite satisfactory to him as a philosopher and scientist . . . The atomic doctrine was to lead to modern chemistry, whereas the doctrine of the qualities favored the rise of the 'science' of alchemy.' It should be noted that, in Galen's own time, the atomic doctrine was the source of the hated Erasistratean views.

It was the elusive 'Jabir', some five hundred years later who used the quality 'dry' to describe those exhalations of the earth which were converted into 'sulphur', the 'moist' exhalations being the source of 'mercury'. Thus the qualities entered on that long alchemical path which eventually led them to chemistry. This section is therefore appropriately concluded by a consideration of the relation between Galen's concepts and those of Stahl, Boyle, Mayow and Lavoisier.

The final section of the book deals with the applications of Galen's humoral doctrine to health and disease, and clarifies the logic of his classification of diseases. Here Dr. Siegel emphasizes the complementary aspects of humoral and morphological concepts of pathology. The basic soundness of Galen's humoral views (which were after all Hippocratic in origin) is brought out by showing them as anticipations of those of Claude Bernard and even Virchow.

In the application of these pathological principles to clinical medicine, i.e. in combining Galen's concept of humoral dyscrasias with the clinical manifestations of local pathology as described by Galen in his *De Locis Affectis*, some brilliant diagnoses are revealed. Galen's description, for example, of haemolytic jaundice following snake bite is so accurate as to be unmistakable, as is his description of the anthrax pustule. Dr. Siegel carefully distinguishes between the accurate clinical description, recognisable to us today, and the pathological interpretation of the syndrome.

This is a controversial book. Few will read it without being stimulated or irritated by the section on cardiovascular physiology which would appear to present Dr. Siegel's personal viewpoint. There is something of Galen's own style in his strong advocacy of his point of view. Readers will have to make up their own minds as to the validity of the case he has presented.

In contrast the sections of the book dealing with the clinical aspects of Galen's works convey an impression of impartial and informative balance which renders them unquestionably of great assistance in the appreciation of Galen's achievements.

K. D. KEELE

*The Essential Writings of Erasmus Darwin*, chosen and edited with a linking commentary by DESMOND KING-HELE, London, McGibbon & Kee, 1968, pp. 223, illus., 45s.

Anybody who has tried to read Erasmus Darwin's *Zoonomia* or his *Botanic Garden* will be familiar with the *longeurs* of those extraordinary compositions and be prepared to turn with relief to the brief selections of important passages which are offered here. Darwin was a man of wide ranging interests and diverse talents, not all of which were expended in his practice of medicine. His speculations included the idea of evolution which was taken up and demonstrated scientifically by his

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more famous grandson Charles, but his practical inventions included a speaking-machine, horizontal windmills, and a new type of carriage. As one of the leading members of the celebrated Lunar Society of Birmingham, he became a close friend of Boulton, Watt and Wedgwood, while he became involved in a bitter controversy with another member, William Withering, over priority in the use of digitalis in cardiac dropsy. In his brief comment on this episode, the editor completely misses the point, scientifically, by denying it to either since it 'had been known to Galen'. Nevertheless, this is a most useful and attractive little book which should introduce more readers to one of the more colourful characters in English scientific history than have ever been gained by the original texts.

F. N. L. POYNTER

*A Surgeon in the Early Nineteenth Century: the Life and Times of John Green Crosse, M.D., F.R.C.S., F.R.S. (1790–1850)*, by V. MARY CROSSE, Edinburgh and London, E. & S. Livingstone, 1968, pp. xii, 210, illus., 40s.

John Green Crosse was a prodigious worker; no task was too great to be faced, and no event too small to be recorded in case-books, diaries, and letter-books, now fortunately preserved.

It would be difficult to select any one particular chapter from this notable book for special commendation; all the chapters are packed with information. Dr. V. Mary Crosse traces the career of this astonishing man from his early life in Suffolk. There are entertaining accounts of formative years in London at the Great Windmill School of Anatomy at the time of Sir Charles Bell. Mention is also made of many famous physicians, apothecaries and surgeons—including Sir Everard Home, whose dresser Crosse was at St. George's Hospital. Conditions were not always easy for Crosse. There were setbacks in Dublin, and others followed.

After settling in Norwich, Crosse's achievements were amazing. There were the exigencies of practice, coupled with writing, reading, research on smallpox and notably on urinary stones. But this was not all; he was constantly occupied with the formation of societies, the organization of departments, and a multitude of other activities. These are exemplified and tabulated in the eight appendices which the author has wisely added. It comes as no surprise that John Green Crosse of Norwich became Jacksonian Prizeman at the Royal College of Surgeons of England and was elected to the Fellowship of the Royal Society.

Throughout, this book reads so smoothly that when once started it is difficult to set it aside. With animated comments on times and customs, it is more than a biography—an indispensable aid to anyone studying the complex facets of the first half of last century. The illustrations are superb and particularly well placed in regard to the continuity of the text. To this pleasing sequence the author has obviously given much thought. This volume contains so much information which is not readily available elsewhere, that the author must be complimented on the splendid outcome of her detailed and patient research.

NORMAN M. MATHESON